

Contaminant Screening Study Libby Asbestos Site, Operable Unit 4 Libby, Montana

Final Summary Report for the Cabinet View Country Club Investigation

April 2005



Summary Report

Response Action Contract for Remedial, Enforcement Oversight, and Non-Time Critical Removal Activities at Sites of Release or Threatened Release of Hazardous Substances in EPA Region 8

U.S. EPA Contract No. 68-W5-0022

Final Summary Report
For the Cabinet View Country Club Investigation,
Contaminant Screening Study,
Libby Asbestos Site, Operable Unit 4

April 21, 2005

Work Assignment No.: 137-RIRI-08BC Document Control No.: 3282-137-PP-SAMP-22885

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Acronyms

below ground surface bgs CDM CDM Federal Programs Corporation **CSF** close-support facility CSS contaminant screening study **CVCC** Cabinet View Country Club **EPA** U. S. Environmental Protection Agency LA Libby amphibole OU operable unit **PLM** polarized light microscopy QA/QC quality assurance/quality control QC quality control RI remedial investigation SAP sampling and analysis plan **SRC** Syracuse Research Corporation VE visual area estimation % percent

Section 1 Introduction

The purpose of this report is to summarize contaminant screening study (CSS)/remedial investigation (RI) field activities conducted by CDM Federal Programs Corporation (CDM) at the Cabinet View Country Club (CVCC) in Libby, Montana between June 2004 and December 2004.

Consistent with other areas of Libby, Montana, vermiculite may have been used as base and/or fill material throughout the golf course greens, fairways, tee boxes, and sand traps. Visual inspections were performed and soil samples were collected, to determine if vermiculite and/or Libby amphibole (LA) is present in these areas of the golf course. In addition, an interior inspection of the club house and pump house were performed to determine the presence of vermiculite containing insulation. All investigation activities were conducted in accordance with the Final Sampling and Analysis Plan (SAP), Remedial Investigation (CDM 2003) and Final Sampling and Analysis Plan Addendum for the Cabinet View Country Club (SAP Addendum) (CDM 2004a).

This summary report presents verbal interview information, visual inspection results, site-specific surface soil sampling data, and dust sampling data to be used in RI decision making for CVCC.



Section 2 Field Activities

The CVCC investigation consisted of a verbal interview, visual inspection for vermiculite, and surface soil sampling. Unless noted in Section 3.1, all field documentation and sample collection procedures provided or referenced in the SAP Addendum were followed. The following sections summarize the CVCC investigation field activities.

2.1 Verbal Interview

An interview was conducted with CVCC personnel on September 30, 2004 to determine if there were any known locations of visible vermiculite on the CVCC property. During the interview it was stated that some vermiculite was brought in as fill material for tees and greens, and the pump house contained vermiculite used as insulation in an add-on section. There were no other known areas of vermiculite at the CVCC property.

2.2 Visual Inspection

As part of the CVCC investigation the club house and pump house were inspected to determine if vermiculite containing insulation or building materials were present in these structures. The results of these interior inspections are discussed in this section. The primary and secondary structure information field forms filled out during these inspections are included in Appendix A.

The only vermiculite observed during the visual inspections of the club house and the pump house was in the pump house where it appeared to have sifted into the walls of the original section and in half of the attic space at a depth of ½ inch.

In addition, during all soil sampling activities observations were made regarding any vermiculite observed. The specifics of vermiculite observed during soil sampling are discussed in Section 2.3.

2.3 Soil Sampling

Soil sampling at the CVCC was conducted in three separate events: June 2004, September 2004, and December 2004. Each sampling event is discussed in this section. Soil samples were collected, prepared, and analyzed in accordance with procedures presented or referenced in the SAP Addendum.

In total, 76 surface soil samples, 10 subsurface soil samples, and 2 samples from the bunker sand stock pile were collected during this investigation (Figure 1). As applicable to all soil samples collected under the Libby RI program, soil samples were processed at CDM's close support facility (CSF) in Denver in accordance with the soil preparation plan (CDM 2004b) and analyzed for LA asbestos using two techniques:



polarized light microscopy (PLM) visual area estimation (VE) and the PLM gravimetric method (Syracuse Research Corporation [SRC] 2003). The U.S. Environmental Protection Agency (EPA) is in the process of evaluating the accuracy and replicatability of each of these methods. However, based on EPA's performance evaluation study to date, PLM-VE results are currently being used to make project remediation decisions. For the purposes of this report, only PLM-VE results are presented.

2.3.1 June 2004 Soil Sampling Event

On June 4, 2004, soil sampling was conducted at the #3 tee box per the EPA's request. CVCC had informed the EPA of impending repairs to the #3 tee box; therefore, EPA requested that CDM determine if LA was present in the tee box before the repairs were made.

Two five-point composite samples (CS-18555 and CS-18556) were collected from the upper and lower tee box, respectively (Figure 1). Both samples were collected from 0-8 inches below ground surface (bgs) and no visible vermiculite was observed in either sample or to an exploratory depth of 12 inches.

Sample CS-18555 collected from the upper tee box had trace amounts of LA (< 0.2 percent [%]) and sample CS-18556 was non-detect for LA. Logbook notes and field sample data sheets are provided in Appendix B, and all soil sample results are presented in Table 1.

2.3.2 September 2004 Soil Sampling Event

During the September 2004 soil sampling event, conducted from September 27th to September 30th, a total of 41 soil samples were collected. Of these 41 samples, 20 were collected from the course's greens (10 samples from 0-12"bgs and 10 samples from 12-24"bgs), 19 were collected from the course's tees with each sample from 0-8"bgs, and two were collected from the course's stockpile of sand used in the course bunkers. All samples were collected as five-point composite samples except for the samples collected from the sand stockpile, which were grab samples.

Of the 41 samples collected during the September 2004 soil sampling event, 24 field samples and one field duplicate had trace amounts (< 0.2%) of LA. These samples are shown on Figure 1, and summarized in Table 2. All other samples collected during this investigation were non-detect for LA and did not contain any visible vermiculite.

Logbook notes and field sample data sheets are provided in Appendix B, and all soil sample results are presented in Table 1.

2.3.3 December 2004 Soil Sampling Event

Due to the results of the September 2004 sampling event, EPA requested additional samples be collected from the tee and fairway areas at the CVCC. This sampling



event was conducted between December 10, 2004 and December 13, 2004. During this sampling event, 45 grab samples were collected from 0-1"bgs.

Of the 45 samples collected during the December 2004 soil sampling event, 7 samples had trace amounts (< 0.2%) of LA and 2 had concentrations of < 1% LA. These samples are shown in Figure 1 and summarized in Table 3. All other samples collected during this investigation were non-detect for LA and did not contain any visible vermiculite.

Vermiculite was not observed or detected in any of the samples collected from the fairways. Logbook notes and field sample data sheets are provided in Appendix B, and all soil sample results are presented in Table 1.

2.4 Dust Sampling

During the September 2004 sampling event, one dust sample, CS-18662, was collected from horizontal surfaces and high traffic areas of the pump house during the CVCC investigation. LA was not detected in this sample. Logbook notes and field sample data sheets are provided in Appendix B, and sample results are presented in Table 4.



Table 2. Summary of Soil Samples Collected in September 20004 that Contain LA.

Sample Index ID	Hole #	Location	Depth (inches bgs)	LA (%)	Comments on Visible Vermiculite
CS-18621		Green	0-12	TR	Vermiculite was observed in the center and eastern subsamples
CS-18623	9	Men's tee	0-8	TR	Visible tailings materials 4-8"bgs in subsamples
CS-18624		Women's tee	0-8	TR	No visible vermiculite
CS-18625	1	Men's tee	0-8	TR	No visible vermiculite
CS-18627		Green	0-12	TR	No visible vermiculite
CS-18630		Tee	0-8	TR	No visible vermiculite
CS-18631	2	Green	0-12	TR	No visible vermiculite
CS-18632	1	Green	12-24	TR	No visible vermiculite
CS-18635	3	Green	0-12	TR	No visible vermiculite
CS-18638	4	Green	0-12	TR	No visible vermiculite
CS-18640		Men's tee	0-8	TR	No visible vermiculite
CS-18642	5	Women's tee	0-8	TR	No visible vermiculite
CS-18643		Green	0-12	TR	No visible vermiculite
CS-18645		Men's long tee	0-8	TR	No visible vermiculite
CS-18646*	6	Men's long tee	0-8	TR	No visible vermiculite
CS-18648		Women's tee	0-8	TR	No visible vermiculite
CS-18649	6	Green	0-12	TR	No visible vermiculite
CS-18652	7	Women's tee	0-8	TR	Few vermiculite flakes visible in 1 subsample
CS-18653	1	Green	0-12	TR	Vermiculite visible 4-8"bgs in 3
CS-18654	1	Green	12-24	TR	No visible vermiculite
CS-18656	8	Men's tee	0-8	TR	No visible vermiculite
CS-18657	1	Green	0-12	TR	No visible vermiculite
CS-18658	1	Green	12-24	TR	No visible vermiculite
CS-18661	1	Tee and practice	0-8	TR	No visible vermiculite

^{*}Duplicate sample of CS-18645; bgs – below ground surface; TR – trace (<.0.2%)



Table3. Summary of Soil Samples Collected in December 20004 that Contain LA.

Sample Index ID	Hole #	Location	Depth (inches bgs)	LA (%)	Comments on Visible Vermiculite
CS-18681	_1	Men's tee	0-1	TR	No visible vermiculite
CS-18697	5	Men's tee	0-1	TR	No visible vermiculite
CS-18699		Women's	0-1	TR	No visible vermiculite
CS-18704		Men's long	0-1	TR	No visible vermiculite
CS-18705	6	Men's short	0-1	TR	No visible vermiculite
CS-18706		Women's	0-1	TR	No visible vermiculite
CS-18714	8	Women's	0-1	TR	No visible vermiculite
CS-18718	9	Men's tee	0-1	<1	Vermiculite observed
CS-18719		Women's	0-1	<1	No visible vermiculite

bgs - below ground surface; TR - trace (<0.2%)



Section 3 Quality Assurance/Quality Control

CDM has established a formal quality assurance program to ensure consistently high quality project deliverables under its Response Action Contract with EPA. For work conducted by CDM in Libby, quality assurance/quality control (QA/QC) measures include the collection of quality control (QC) samples (such as soil duplicate samples and equipment blanks), implementation of a laboratory quality assurance program, review of project reports by a CDM-approved quality assurance staff member, and an auditing component to assess the effectiveness of the quality assurance program. The following sections describe deviations from the SAP Addendum and the implications of those deviations on project or data quality objectives.

3.1 Deviations from the Sampling and Analysis Plan Addendum

All requirements detailed in the SAP Addendum were met without exceptions.

3.2 Achievement of Data Quality Objectives

The data quality objectives of this investigation were met.

3.3 Data Validation and Reporting

None of the analytical data contained in this report was further validated beyond that performed by the laboratory as part of their QA/QC program. Therefore, it is assumed that the raw data are useable for their intended purpose, which is to determine the extent of LA asbestos contamination at the CVCC.



Section 4 References

CDM. 2003. Final Sampling and Analysis Plan, Remedial Investigation, Libby Asbestos Site, Operable Unit 4. May.
2004a. Sampling and Analysis Plan Addendum for the Cabinet View Country Club. July.
2004b. Close Support Facility, Soil Preparation Plan (Revision No. 1), Libby, Montana Asbestos Project, Sample Processing. March.
SRC. 2003. Analysis of Asbestos Fibers in Soil by Polarized Light Microscopy. SRC-LIBBY-03 (Rev. 0). March 3, 2003.



Table 1 Results of Soil Samples Collected During Investigations at CVCC

İ			Location Description			_	Sample		P	LM	
Sample ID	Parent ID	Property Group (Location)	(Sub Location)	Media Type	Matrix	Category	Date	Method	LA Bin	LA (%)	C (%)
CS-18555-FG1			Hole #3 tee-box (upper)	Soil-Like	Surface soil	Field Sample	6/4/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet	11.1-40	0.71.7	0	5:4461-	0/4/0004	1011111			1,15
CS-18556-FG1		View Country Club 378 Cabinet View Rd - Cabinet	Hole #3 tee-box (lower)	Soil-Like	Surface soil	Field Sample	6/4/2004	PLM-VE	A	ND	ND
CS-18621-FG1			Hole #9 green	Soil-Like	Surface soil	Field Sample	9/27/2004	PLM-VE	В1	TR .	ND
23-10021-FG1		378 Cabinet View Rd - Cabinet	role no green	SUIFLIKE	Oditace Son	ried Sample	3/2/12004	IL CIAL A C		 	
CS-18622-FG1		View Country Club	Hole #9 green	Soil-Like	Subsurface soil	Field Sample	9/27/2004	PLM-VE) A	ND	ND
30-10022-1 01		378 Cabinet View Rd - Cabinet	. toto iro groon	CON ENG		Ticia Campio	0.2772003		· · · · · · · · · · · · · · · · · · ·	 	
CS-18623-FG1		View Country Club	Hole #9 men's tee	Soil-Like	Surface soil	Field Sample	9/27/2004	PLM-VE	B1 .	TR	ND
10020 1 01		378 Cabinet View Rd - Cabinet	Hole #9 women's tee					·			
CS-18624-FG1		View Country Club	(combined)	Soil-Like	Surface soil	Field Sample	9/27/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet									
CS-18625-FG1		View Country Club	Hole #1 men's short tee	Soil-Like	Surface soil	Field Sample	9/27/2004	PLM-VE	B1	TR	TR
		378 Cabinet View Rd - Cabinet]			
CS-18626-FG1_	L	View Country Club	Hole # 1 women's short tee	Soil-Like	Surface soil	Field Sample	9/27/2004	PLM-VE	Α	ND	ND
		378 Cabinet View Rd - Cabinet				T					1 -
CS-18627-FG1		View Country Club	Hole #1 green	Soil-Like	Surface soil	Field Sample	9/27/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet									
CS-18628-FG1			Hole #1 green	Soil-Like	Subsurface soil	Field Sample	9/27/2004	PLM-VE	Α	ND	ND
		378 Cabinet View Rd - Cabinet									
CS-18630-FG1		View Codintry Club	Hole #2 tee	Soll-Like_	Surface soil	Field Sample	9/28/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet						1		ll	11
CS-18631-FG1			Hole #2 green	Soil-Like Soil-Like	Surface soil	Field Sample	9/28/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet			0.1						1
CS-18632-FG1		View Country Club	Hole #2 green	Soil-Like_	Subsurface soil	Field Sample	9/28/2004	PLM-VE	B1	TR	ND
	1	378 Cabinet View Rd - Cabinet		0-212	Contain and	51.110	0/00/0004	DI 14 1/5	1.	ND	TR
CS-18633-FG1		View Country Club	Hole #11 green	Soil-Like	Surface soil	Field Sample	9/28/2004	PLM-VE	A	ND	118
00 40004 504		378 Cabinet View Rd - Cabinet	Wala #44 araan	Cail Like	Cuboudosa sail	Field Comple	0/20/2004	DIMANE	A	ND	ND
CS-18634-FG1	}	View Country Club	Hole #11 green	Soil-Like	Subsurface soil	Field Sample	9/28/2004	PLM-VE		INUI	INU
CC 40635 EC4	1	378 Cabinet View Rd - Cabinet View Country Club	Hole #3 green	Soil-Like	Surface soil	Field Sample	9/28/2004	PLM-VE	B1	TR	ND
CS-18635-FG1	l	378 Cabinet View Rd - Cabinet	I lote ito green	SUITLING	Outlabs soil	rieid Sampie	3/20/2004	IL CIMEAC		''`\	140
CS-18636-FG1	ì	View Country Club	Hole #3 green	Soil-Like	Subsurface soil	Field Sample	9/28/2004	PLM-VE	A	ND	ND
20-10030-FG1	 	378 Cabinet View Rd - Cabinet	c.o iro groon	JOH-LING	30000.1000.0011	r icio dampie	5,25,2004	1. 2 72	 ``	 ```	+
CS-18637-FG1	1	View Country Club	Hole #4 tee box	Soil-Like	Surface soil	Field Sample	9/28/2004	PLM-VE	l a	ND	ND
		378 Cabinet View Rd - Cabinet		<u></u>				1		 	
CS-18638-FG1		View Country Club	Hole #4 green	Soil-Like	Surface soil	Field Sample	9/28/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet					<u> </u>	<u> </u>			
CS-18639-FG1]	View Country Club	Hole #4 green	Soil-Like	Subsurface soil	Field Sample	9/28/2004	PLM-VE	Α	ND	ND
		378 Cabinet View Rd - Cabinet				[
CS-18640-FG1		View Country Club	Hole #5 men's tee	Soil-Like	Surface soit	Fleid Sample	9/28/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet								[
CS-18641-FG1	L	View Country Club	Hole #5 women's short tee	Soil-Like	Surface soil	Field Sample	9/28/2004	PLM-VE	Α	ND	ND
	1	378 Cabinet View Rd - Cabinet				Į .	1			l	
CS-18642-FG1	ļ	View Country Club	Hole #5 women's long tee	Soil-Like	Surface soil	Field Sample	9/28/2004	PLM-VE	B1	TR	ND
	ŀ	378 Cabinet View Rd - Cabinet			٠. ـ	1					1
CS-18643-FG1	L	View Country Club	Hole #5 green	Soil-Like	Surface soil	Fleid Sample	9/28/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet									[]
CS-18644-FG1		View Country Club	Hole #5 green	Soil-Like	Subsurface soil	Field Sample	9/28/2004	PLM-VE	_ A	ND	ND
	l .	378 Cabinet View Rd - Cabinet	1		i	i	j .	j .	1	1 L	

Table 1 Results of Soil Samples Collected During Investigations at CVCC

	_		Location Description	.			Sample	PLM						
Sample ID	Parent ID	(Sub Location)		Category	Date	Method	LA Bin	LA (%)	C (%)					
CS-18646-FG1	CS-18645	378 Cabinet View Rd - Cabinet View Country Club	Hole #6 men's long tee	Soil-Like	Surface soil	Field Duplicate	9/29/2004	PLM-VE	B1	TR	ND			
		378 Cabinet View Rd - Cabinet												
S-18647-FG1		View Country Club	Hole #6 men's short tee	Soil-Like	Surface soil	Field Sample	9/29/2004	PLM-VE	Α	ND	ND			
		378 Cabinet View Rd - Cabinet												
S-18648-FG1		View Country Club	Hole #6 women's tee box	Soil-Like	Surface soil	Field Sample	9/29/2004	PLM-VE	B1	TR	ND			
	i	378 Cabinet View Rd - Cabinet												
S-18649-FG1	ļ	View Country Club	Hole #6 green	Soil-Like	Surface soil	Field Sample	9/29/2004	PLM-VE	B1	TR	ND			
0 10050 501		378 Cabinet View Rd - Cabinet	1155 40 555		0 1 4	E: 110 1	0,00,0004	D						
S-18650-FG1	 	View Country Club	Hole #6 green	Soil-Like	Subsurface soil	Field Sample	9/29/2004	PLM-VE	Α	ND	ND			
0 40054 504	l .	378 Cabinet View Rd - Cabinet	Uale #7 was's land too have	C-9 1 9 -	Curfons soil	Field Comple	0/20/2004	D / .			1,			
S-18651-FG1	 	View Country Club 378 Cabinet View Rd - Cabinet	Hole #7 men's long tee box	Soil-Like	Surface soil	Field Sample	9/29/2004	PLM-VE		ND	ND			
C 400E2 EC1	1) ·	Holo #7 Womans short	Call tile	Curtoso soil	Cield Comple	9/29/2004	DI MANGE	B1	TR	ND			
S-18652-FG1	 	View Country Club 378 Cabinet View Rd - Cabinet	Hole #7 Womens short	Soil-Like	Surface soil	Field Sample	8/29/2004	LLINEAE			100			
S-18653-FG1		View Country Club	Hole #7 green	Soll-Like	Surface soil	Field Sample	9/29/2004	DI MANE	B1	TR	ND			
75-10035-1-G1		378 Cabinet View Rd - Cabinet	Tione wit global	SOFFLIKE	Outlade Boll	Fleid Sample	3/25/2007	L CM-AC		-	1101			
S-18654-FG1	1		Hole #7 green	Soil-Like	Subsurface soil	Field Sample	9/29/2004	PINCE	B1	TR	ND			
10-1000+1 O 1	 	378 Cabinet View Rd - Cabinet	Tioo #1 groot	- OON-LIKE	0000011800 0011	r reio dampio	3/ZS/ZOO4	LENEVE		 ''` 	 '''' - -			
S-18655-FG1	i	View Country Club	Hole #8 women's tee box	Soil-Like	Surface soil	Field Sample	9/29/2004	PI M-VE	A	ND	ND			
0 10000 1 0 1		378 Cabinet View Rd - Cabinet	. 1010 110 110 110 100 100	OON EIRC	0411040 0011	7 ICIG COMPIC	3/23/2001				1			
S-18656-FG1	İ	View Country Club	Hole #8 men's tee box	Soil-Like	Surface soil	Field Sample	9/29/2004	PLM-VE	B1	TR	ND			
	t	378 Cabinet View Rd - Cabinet			<u> </u>					 	+			
CS-18657-FG1	1	View Country Club	Hole #8 green	Soil-Like	Surface soil	Field Sample	9/29/2004	PLM-VE	B1	TR	ND			
		378 Cabinet View Rd - Cabinet												
CS-18658-FG1	1	View Country Club	Hole #8 green	Soil-Like	Subsurface soil	Field Sample	9/29/2004	PLM-VE	B1	TR	ND			
		378 Cabinet View Rd - Cabinet												
CS-18659-FG1		View Country Club	bunker sand pile	Soil-Like	Stockpile	Field Sample	9/29/2004	PLM-VE	Α	ND	ND			
		378 Cabinet View Rd - Cabinet												
CS-18660-FG1	CS-18659	View Country Club	bunker sand pile	Soil-Like	Stockpile	Field Duplicate	9/29/2004	PLM-VE	A	ND	ND			
		378 Cabinet View Rd - Cabinet	Hole #1 tee box & practice								T			
S-18661-FG1	<u> </u>	View Country Club	green	Soil-Like	Surface soil	Field Sample	9/29/2004	PLM-VE	81	TR	ND			
	1	378 Cabinet View Rd - Cabinet			i				1	1	1 1			
S-18663-FG1		View Country Club	Hole #3 women's tee	Soil-Like	Surface soil	Field Sample	9/30/2004	PLM-VE	Α	ND	ND			
	1	378 Cabinet View Rd - Cabinet				ļ ·		L	1	ll				
CS-18681-FG1	ļ	View Country Club	Hole #1 Tee	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	B1	TR	ND			
		378 Cabinet View Rd - Cabinet	-			l			_	1	11			
CS-18682-FG1	 _	View Country Club	Fairway #1	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	Α	ND	ND			
20 40000 504	\	378 Cabinet View Rd - Cabinet	E : "4	0.000			40/40/0004	1	l .	1	11			
CS-18683-FG1		View Country Club	Fairway #1	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	A	ND	ND			
CC 40604 CC1	,	378 Cabinet View Rd - Cabinet	Fainway #4	Call Libra	Curfoss soil	Ciald Comple	40/40/2004	DIMANE		l I	امدا			
S-18684-FG1	 	View Country Club 378 Cabinet View Rd - Cabinet	Fairway#1	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	A	ND	ND			
S-18685-FG1			Fairway#1	Soil Like	Surface soil	Field Cample	12/10/2004	DIMAGE	١,	ND	ND			
- 10000-F G I	 	View Country Club 378 Cabinet View Rd - Cabinet	I aimay #1	Soil-Like	Juliace Soll	Field Sample	12/10/2004	F LIVI-VE	<u> </u>		1 10			
CS-18686-FG1		View Country Club	TEE #2	Soil-Like	Surface soil	Field Sample	12/10/2004	DIMANE	A	ND	ND			
20-10000-FG1	}	378 Cabinet View Rd - Cabinet	, r r u u	JOIPLIKE	Junace Sui	Field Sample	12/10/2004	IL CIAI-AE	 ^ _	NO	+'''-			
CS-18687-FG1	1	View Country Club	Fairway #2	Soil-Like	Surface soil	Field Sample	12/10/2004	DI MANE	l a	ND	ND			
20-1000/-FG1	 	378 Cabinet View Rd - Cabinet	i an way #£	JoinLike	Junace Sui	r leio Sample	12/10/2004	I LINI-AE	 ^-	 '\\	140			
CS-18688-FG1		View Country Club	Fairway #2	Soil-Like	Surface soil	Field Sample	12/10/2004	PI M-VE	A	ND	ND			
20 10000-1 01	 	378 Cabinet View Rd - Cabinet	. a naj na	JOII-LIKE	Outrace son	r leid Jample	12/10/2004	L CIAL-AE	 ^ _	 '" 	+""			
		In a common sign tra . Commer			•	1		1			1 1			

Table 1 Results of Soil Samples Collected During Investigations at CVCC

			Location Description				Sample		P	LM	
Sample ID	Parent ID	Property Group (Location)	(Sub Location)	Media Type	Matrix	Category	Date	Method	LA Bin	LA (%)	C (%)
00 40000 504		378 Cabinet View Rd - Cabinet	TEE #3 ladies	Soil-Like	Surface soil	Field Comple	12/10/2004	PLM-VE		ND	ND
CS-18690-FG1		View Country Club 378 Cabinet View Rd - Cabinet	TEL #3 ladies	3011-LIKE	Surface soil	Field Sample	12/10/2004	PLIVI-VE	_ A	ND	IND
CS-18691-FG1		View Country Club	TEE #3 mens	Soil-Like	Surface soil	Field Sample	12/10/2004	PI M.VE	A	ND	ND
C3-10031-1 C1		378 Cabinet View Rd - Cabinet	1.22 % 1.6.10	OON CINC	Canado con	Tield Gample	12 10/2004		- ^-	 	 ```
CS-18692-FG1	ļ	View Country Club	Fairway #3	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	A	IND	ND
		378 Cabinet View Rd - Cabinet	1								
CS-18693-FG1		View Country Club	TE #4	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE_	A	ND	ND
		378 Cabinet View Rd - Cabinet									
CS-18694-FG1		View Country Club	Fairway #4	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	Α	ND	ND
		378 Cabinet View Rd - Cabinet							-		
CS-18695-FG1		View Country Club	Fairway #4	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	Α	ND	ND
		378 Cabinet View Rd - Cabinet					l . .	 		1	
CS-18696-FG1		View Country Club	#4 fairway	Soil-Like	Surface soil	Field Sample	12/10/2004	PLM-VE	A	ND	ND
		378 Cabinet View Rd - Cabinet	T-0 #5	0.711.75	04		40400004				
CS-18697-FG1	 	View Country Club 378 Cabinet View Rd - Cabinet	Tee #5	Soil-Like	Surface soil	Fleid Sample	12/10/2004	PLM-VE	B1	TR	ND
CC 19609 EC1	ì	View Country Club	#5 tee	Soil-Like	Surface soil	Field Sample	12/10/2004	DIM VE	A	ND	ND
CS-18698-FG1	 	378 Cabinet View Rd - Cabinet	#5 tee	30II-LIKE	Surface soil	rieid Sample	12/10/2004	FLIVI-VE	 ^ 	IND	l ND
CS-18699-FG1	972.0	View Country Club	Tee #5	Soil-Like	Surface soil	Field Sample	12/13/2004	PIMAVE	B1	TR	IND
CO-100884 O1	 	378 Cabinet View Rd - Cabinet		CONTERE	0011000 0011	T TOTAL CHAMPIO	12102007	I CIVI-V.	1	 ''` 	1
CS-18700-FG1	ì	View Country Club	#5 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α	ND	ND
10.00.0.	<u> </u>	378 Cabinet View Rd - Cabinet				110.000	12,0,200		<u> </u>	 	
CS-18701-FG1	ŀ	View Country Club	Fairwy #5	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α	ND	ND
	1	378 Cabinet View Rd - Cabinet			<u> </u>						
CS-18702-FG1		View Country Club	#5 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	l a	ND	ND
		378 Cabinet View Rd - Cabinet							<u> </u>		
CS-18703-FG1	L	View Country Club	#5 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	A	ND	ND
	1	378 Cabinet View Rd - Cabinet					•		, , ,		
CS-18704-FG1	1	View Country Club	#6 Tee	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet				·	Ì	1	1	1 1	1 1
CS-18705-FG1		View Country Club	Tee #6	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	B1	TR	ND
	1	378 Cabinet View Rd - Cabinet	T 40		0.4		40140 000		۱ ـ.	11	ll
CS-18706-FG1		View Country Club	Tee #6	SoiHLike	Surface soil	Field Sample	12/13/2004	IPLM-VE	B1	TR	ND
CC 19707 EC1	1	378 Cabinet View Rd - Cabinet	Fairway #6	Soil-Like	Surface soil	Field Sample	12/13/2004	DIMVE	l a	ND	ND
CS-18707-FG1	 	View Country Club 378 Cabinet View Rd - Cabinet	r all way #0	JOII-LIKE	Surface soil	rieid Sample	12/13/2004	PLIVI-VE	 ^ -	INUI	INDI
CS-18708-FG1	l	View Country Club	#6 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PI M-VF	A	ND	ND
00-10/00101	 	378 Cabinet View Rd - Cabinet		0011 21110	04.1400.00.	1 icid Gampie	12/10/2004	1	 ``	1100	1,10
CS-18709-FG1	1	View Country Club	#6 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	A	ND	ND
	1	378 Cabinet View Rd - Cabinet			· · · · · · · · · · · · · · · · · · ·	1				 	
CS-18710-FG1		View Country Club	#7 Tee	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	A	ND	ND
		378 Cabinet View Rd - Cabinet									
CS-18711-FG1	<u>L</u>	View Country Club	Tee #7	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α	ND	ND
	1	378 Cabinet View Rd - Cabinet	II.						•		
CS-18712-FG1	<u> </u>	View Country Club	#7 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α_	ND	ND
	}	378 Cabinet View Rd - Cabinet				1			1	1 1	
CS-18713-FG1	↓	View Country Club	#8 Tee	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	A	ND	ND
	1	378 Cabinet View Rd - Cabinet	7		ت ما						11
CS-18714-FG1	<u> </u>	View Country Club	Tee #8	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	B1	TR	ND
		378 Cabinet View Rd - Cabinet									

Table 1 Results of Soil Samples Collected During Investigations at CVCC

			Location Description				Sample	PLM						
Sample ID	Parent ID	Property Group (Location)	(Sub Location)	Media Type	Matrix	Category	Date	Method	LA Bin	LA (%)	C (%)			
		378 Cabinet View Rd - Cabinet												
CS-18716-FG1_	<u> </u>	View Country Club	Fairway #8	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α	ND	ND			
		378 Cabinet View Rd - Cabinet								Ţ _ Ţ				
CS-18717-FG1_			#8 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	A	ND	ND			
		378 Cabinet View Rd - Cabinet									T			
CS-18718-FG1	<u> </u>	View Country Club	Tee #9	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	B2	< 1	ND			
		378 Cabinet View Rd - Cabinet		1				1	1					
CS-18719-FG1_	<u> </u>		#9 Tee	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	B2	< 1	ND			
		378 Cabinet View Rd - Cabinet	1											
CS-18720-FG1	<u> </u>		#9 drop area	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α	ND	ND			
		378 Cabinet View Rd - Cabinet												
CS-20002-FG1	<u> </u>	View Country Club	#9 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	A	ND	ND			
		378 Cabinet View Rd - Cabinet								[]				
CS-20003-FG1	<u> </u>	View Country Club	#9 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	A	ND	ND			
		378 Cabinet View Rd - Cabinet												
CS-20004-FG1	<u> </u>	View Country Club	#9 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	_ A	ND	ND			
		378 Cabinet View Rd - Cabinet												
CS-20005-FG1	<u> </u>	View Country Club	#9 fairway	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α	ND	ND			
		378 Cabinet View Rd - Cabinet									T			
CS-20006-FG1	L	View Country Club	#1 ladies tee	Soil-Like	Surface soil	Field Sample	12/13/2004	PLM-VE	Α	ND	ND			

Notes:

Samples with LA Detected

PLM - polarized light microscopy

VE- visual estimation

LA- Libby amphibole

C- Chrysotile

FG1- fine ground fraction TR- Trace

ND- Non-detect

Table 2. Summary of Soil Samples Collected in September 20004 that Contain LA.

Sample Index ID	Hole #	Location	Depth (inches bgs)	LA (%)	Comments on Visible Vermiculite
CS-18621		Green	0-12	TR	Vermiculite was observed in the center and eastern subsamples
CS-18623	9	Men's tee	0-8	TR	Visible tailings materials 4-8"bgs in subsamples
CS-18624		Women's tee	0-8	TR	No visible vermiculite
CS-18625	1	Men's tee	0-8	TR	No visible vermiculite
CS-18627	1	Green	0-12	TR	No visible vermiculite
CS-18630	_	Tee	0-8	TR	No visible vermiculite
CS-18631	2	Green	0-12	TR	No visible vermiculite
CS-18632		Green	12-24	TR	No visible vermiculite
CS-18635	3	Green	0-12	TR	No visible vermiculite
CS-18638	4	Green	0-12	TR	No visible vermiculite
CS-18640		Men's tee	0-8	TR	No visible vermiculite
CS-18642	5	Women's tee	0-8	TR	No visible vermiculite
CS-18643		Green	0-12	TR	No visible vermiculite
CS-18645	:	Men's long tee	0-8	TR	No visible vermiculite
CS-18646*	6	Men's long tee	0-8	TR	No visible vermiculite
CS-18648		Women's tee	0-8	TR	No visible vermiculite
CS-18649	6	Green	0-12	TR	No visible vermiculite
CS-18652	7	Women's tee	0-8	TR	Few vermiculite flakes visible in 1 subsample
CS-18653	1	Green	0-12	TR	Vermiculite visible 4-8"bgs in 3
CS-18654]	Green	12-24	TR	No visible vermiculite
CS-18656	8	Men's tee	0-8	TR	No visible vermiculite
CS-18657		Green	0-12	TŔ	No visible vermiculite
CS-18658		Green	12-24	TR	No visible vermiculite
CS-18661	1	Tee and practice	0-8	TR	No visible vermiculite

^{*}Duplicate sample of CS-18645; bgs – below ground surface; TR – trace (<.0.2%)



Table 4 Results of Dust Samples Collected During Investigations at CVCC

								AHERA / ASTM 5755																			
1	!											Libby Ar	nphiboles (L	4)		CI	rysotile (C)			Other Ar	nphiboles (O	A)_		T	otal Asbe	stos	
Sample ID	Property Group (Location)	Sample Group	Location Description (Sub Location)	Media Type	Matrix	Sample Type	Category	Area (cm²)	Sample Date	Filter Status Non Analyzed	S<5u	\$>5u	Asb load (S/mm2)	Asb conc (Dust ≍ S/cm²)	S<5u	S>5u	Asb load (S/mm²)	Asb conc (Dust = S/cm²)	S<5u	S>5u	Asb load (S/mm2)	Asb conc (Dust = S/cm²)	Asbestos Type Identified	S<5u	S>5u	Asb load (S/mm2)	Asb conc (Dust = S/cm²)
CS-18662	1260 Cabinet Heights Rd	Pumphouse	Ground floor	Dust	Horizontal surface & high traffic area		Field Sample	300	9/30/2004		0	0	< 258.74	< 332	0	0	< 258 74	< 332	0	0	< 258 74	< 332		0	0	< 260.00	< 330

LA- Libby Amphibole

C- Chrysotile

OA- Other Amphiboles

S/mm²- structures per millimeter squared

S/cm²- structures per centimeto cm²- centimeter squared

<- less than

Section 4 References

CDM. 2003. Final Sampling and Analysis Plan, Remedial Investigation, Libby Asbestos Site, Operable Unit 4. May.

_____. 2004a. Sampling and Analysis Plan Addendum for the Cabinet View Country Club. July.

_____. 2004b. Close Support Facility, Soil Preparation Plan (Revision No. 1), Libby, Montana Asbestos Project, Sample Processing. March.

SRC. 2003. Analysis of Asbestos Fibers in Soil by Polarized Light Microscopy. SRC-LIBBY-03 (Rev. 0). March 3, 2003.



Section 3 **Quality Assurance/Quality Control**

CDM has established a formal quality assurance program to ensure consistently high quality project deliverables under its Response Action Contract with EPA. For work conducted by CDM in Libby, quality assurance/quality control (QA/QC) measures include the collection of quality control (QC) samples (such as soil duplicate samples and equipment blanks), implementation of a laboratory quality assurance program, review of project reports by a CDM-approved quality assurance staff member, and an auditing component to assess the effectiveness of the quality assurance program. The following sections describe deviations from the SAP Addendum and the implications of those deviations on project or data quality objectives.

3.1 Deviations from the Sampling and Analysis Plan Addendum

All requirements detailed in the SAP Addendum were met without exceptions.

3.2 Achievement of Data Quality Objectives

The data quality objectives of this investigation were met.

3.3 Data Validation and Reporting

None of the analytical data contained in this report was further validated beyond that performed by the laboratory as part of their QA/QC program. Therefore, it is assumed that the raw data are useable for their intended purpose, which is to determine the extent of LA asbestos contamination at the CVCC.



Appendix A Verbal Interview Documentation

BD- 004343

LIBBY ASBESTOS PROJECT "Contaminant Screening Study Secondary Structure Information Field Form (Secondary IFF)

Field Lagback No.: 100386	Page No.: 17 Site Visit Date:	9/30/04
Address: 1260 Cabiret Hei	ahts Rd Structure Descri	
Occupant CVCC	Ph	one Number: 406.293 .2707
Owner (if different than occupant):	Ph — CVC T2 4/30/04 Ph	one Number:
Business Name: CVCC		
Sampling Team: Tommy Co.	OK Terry Crowell	
Field Form Check Completed by (100	0% of forms):	
Screening Field Chack Completed by	(2% of forms):	
Dața (tem	Vajue	Notes
STRUCTURE ATTRIBUTES		
Property Description	Residential Industrial Commercial	purphouse is larged by
Surrounding Land Use	Residential Industrial Commercial	
	School Mining	
	Other:	
Year of Construction	pre-1950s (Unknown)	
Square Footage	240	
Construction Material	Wood frame Masonry/Stone	
4	Other cinderblock	_
Number of Floors Above Ground	① 2 3 Other:	
Number of Rooms Per Floor Above Ground	1: 2 2 72 3:	
Basement	Yes (No) .	
Heating Source	Wood/Coal Electric Propane/Gas	
	NX yeads 10 ther.	
Heat Distribution	Forced air Radiant	
	NA visianther:	

Na

Yes

Was the building remodeled?

GSS Secondary Structure IFF (continued)

	Address:	1260	cabinet	Heigh	ues Rd
--	----------	------	---------	-------	--------

BD# BD-004343

	Pata Item	1	Value	Notes	
CONTAM	INANT SCREENING ST	UDY ASSESSMEN	П	,	
Occupant Information ☐ Verbal Interview Complete:					
is there any knowledge of former miners, close relatives of miners, or any highly exposed persons living or visiting the property?			No .	If unknown, why? - BISINESS	
	ent, past or present, with an aspestos-related	Yes Unknown	No	If unknown, why? —BUSINESS	
indogr info	mation	,	e □ Inde	oor Visual Inspection Complete:	
Poes the in insulation?	terior have vermiculite attle	Yes Unknown	(NO) TECTO	If unknown, why?	
attic insulati	rior ever have vermiculite on? If attic currently has VCI	Yes Unknown	Na NA	If unknown, why?	
Are there vermiculite additives in any of the building materials?		of Yes Unknown	Ng	If unknown, why? Type and location of building material;	
Location of Indoor vermiculite (circle all that apply)			Crawl Space None Space: Basement, Second Floor, Attached	If In Ilving space, provide specific location: -ATTC IN NESECTION - HALS AROUD DEIGNAC (REMANT SIFT) SECTION -GF VISIBLE IN ORIGINAL SECTION	
ADDITIONA 1	L INFORMATION (Note a	ny partial access or	sample collection issues	Appears There is appear 1/2" OF UCI IN ATTIC.	
	VC I REMNANTS	NO VCI			
121	1/211101	CURPBITY	1		
	DEPTH	INSULATED W/	11		
		ROCK WOOL	1		
		, , , , , , , , , , , , , , , , , , , 	17		
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•	□ Soil samples	collected (Date:
Primary Structure and	LIBBY ASBESTOS PROJECT Contaminant Screening Study Property Assessment Information F	ield Form (Primary IFF)
Address: 378 Cabine! Vidor: Occupant: CVCC Owner (if different than occupant): Business Name: CVCC Sampling Team: Terry Crow	rell/Tommy Crok 1% of forms):	on: clubhouse
Date Item	Value	Nates
HOUSE ATTRIBUTES		
Property Description	Residential Industrial Commercia	
Surrounding Land Use .	Residential Industrial Commercial School Mining Other:	·
Year of Construction	~ 1970 Unknown	
Square Footage .	4,000	main floor + basemen
Construction Material	Wood frame Masonry/Stone Other:	·
Number of Floors Above Ground	1 2 3 Other	
Number of Rooms Per Floor Above Ground	1: 3 2: 3:	
Basement	(Yes) No	
Heating Source	Wood/Coal Electric Fropane/Gas Other	-
Heat Distribution	Porced air Radiant	

Other:

CSS Primary Structure [FF (continued)

Address:	4	80# <u>004342</u>
Data Item	Value	Notes
OCCUPANT INFORMATION		
Was the residence/quilding remodeled?	Yes No	
	If yes,	
	When (years): <2 2-5 >5	
	Where: Attic Living Areas Garage	
	Basement	
	Other: ADD FEW YEARS	GAROR
Has resident/business purchased any Libby vermiculita materials from W.R. Grace in the past?	Yes No Pay leng	BROUGHT IN AS FILL FOR TIES/GREGOES
Has the property at this location been used for a for-profit enterprise of distributing, treating, storing, or disposing of Libby vermiculite?	Yes No	·
Contaminant screening study as	SSESSMENT	
Occupant Information	٠	Verbal Interview Complete:
is there any knowledge of former miners, close relatives of miners, or any highly exposed persons living or visiting the property?	Unknown 9/30/04	If unknown, why?
is the resident, past or present, diagnosed with an aspestos-related disease?	Yes (No)	If unknown, why?
Indoor information	Indoor	Visual inspection Complete:
Does the interior have vermiculite attic insulation?	Yes No	if unknown, why?
Old the interior ever have vermiculite affic insulation?	Yes No NA Unknown NA	If unknawn, why?
NA applies if attic currently has VCI		
Are there vermiculite additives in any of	Yes (No	If unknown, why?
the building materials?	Uпкло м п	Type and location of building material:

CSS Primary Structure IFP (continued)

Address:		BD# 004342
Data item	Value	Notes
Location of Indoor vermiculite (circle all that apply)	Attle Walls Crawl Space None Visual in Living Space: Basement, Ground Floor, Second Floor, Attached Garage Other:	If in living space, provide specific location:
Outdoor Information	Outdoor '	Visual Inspection Complete;
Location of outdoor varmiculite (circle all that apply)	Driveway Flowerbed Garden Yard Former Flowerbed Former Garden Stockpile None Other House, 1, 7 (Bdlph)	-SOC LOGBOOK AND PSDS FOR ADDIL INFO
Oversij Assessment Complete:	Reconnaissance (Verbal Interview, Indoor, O	utdoor (n spect ion)
Are primary source materials present at the property?	Yes No	- Homp Howe HAS UCI - Under "9 BE, #1 THE
Where are primary source materials located?	Inside Outside Both NA	NA applies if no primary source materials are located at the property.
	was a few flakes observed t	erneum e ouseans in the supple
		,
		<u> </u>

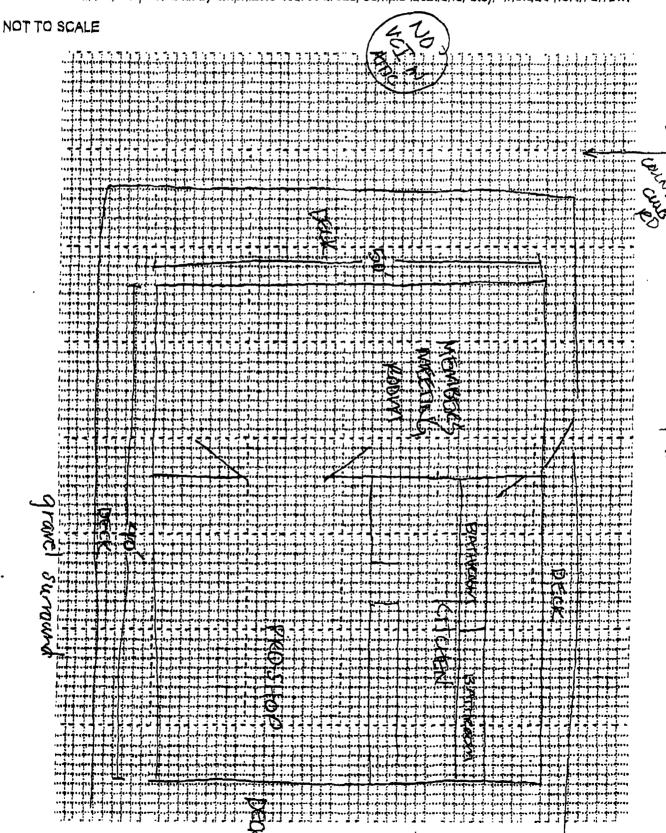
CSS Primary Structure IFF (continued)

Address: 378 Cabinet View Country Club Rd

BD# 004342

FIELD DIAGRAM OF PROPERTY

Identify important features (i.e. drainage, trees, gardens, structures, flowerbeds, utility poles, known underground utilities, suspected Libby amphibole source areas, sample locations, etc). Include north arrow.



Appendix B Field Log Notes and Field Sample Data Sheets

June 2004 Sampling Event

callon Cabinet View Country Club Dale 6-4-04 place / Glient Libby Asherlas US EPA Region & Cabinet View Country Club 19902: Arrive @ golf course to condust oil sampling on the hole # 3 toe-box. All work IAW CSS SAP Revision I, 2003. 3. Show Carthon) and T. Serti onsite. No L.V. is observed in the soils of the of lower techon at hole #3. The material in question was abuiously micaceous hatine soud, produced from slacial deposits Soil sembles on FSDS-000164 are as follows: Hole #3 Hole #3 roperty (Pa) SP-124958

Sheet No.: S- 100164

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL							
Field Logbook No: 100329 Page No: 77 Sampling Date: 6-4-04							
idress: 378 Calinat View Rd. Owned Tenant: Calinat View Country Clin							
Business Name: Cu brank View Golf Course							
Land Use: Resident	Land Use: Residential School Commercial Mining Roadway Other ()						
Sampling Team: MAG	CTEC CDM Other	Names: A. Sha	· Ton Sixti				
• -			7				
Data Item	Sample 1	Sample 2	Sample 3				
index ID	CS- 18555	CS- 18556					
Location ID	SP- 124957	SP- 124958					
Sample Group	Property (P.)	Property (Pa)					
Location Description (circle) -	Back yard Front yard Side yard Driveway Other 3 fee box (usper	Back yard Front yard Side yard Driveway	Back yard Front yard Side yard Driveway Other				
Category (circle)	FD of	FD ofField Blank (lot or equipment)	FS FD of Field Blank (let or equipment)				
Matrix Type (Surface soll unless other wise noted)	Surface Soil Other	Surface Soil Other	Surface Soil				
Type (circle)	Grab Comp # subsamples _5_	Grab Comp# subsamples 5	Grab V Comp. #5ubsamples				
Sample Time -	0922	0930 1	1 Y				
Top Depth (in.)	0.	0					
Bottom Depth (in.)	8	8	1.				
Field Comments Note if vermiculite is visible in sampled area	No L.V. observed	BD-NA	BD				
	in Sample						
Entered (LFO)	Volpe: Entered Validated	Volpe: Entered Validated	Volpe: Entered Validated				

September 2004 Sampling Event

"Outdoor writing products for outdoor writing people."

HER WRITING PAPER

TRANSIT

\II-Weather Notebook No. 301



RECYCLABLE

"File in the Rain" - A unique All-Weather Wiling payer created to aked water and enhance the woten image. It is widely used throughout the world. for recording critical liest data in all kinds of weather.

Available in a variety of standard and custom printed. case-bound field books, foose leaf, spiral and stapled notebooks, multi-copy sals and capler paper.

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vestigation Asbestos Project CABINET ITEN COUNTRY CLUB 27/04-

4 sis x 7'-48 Number 1 Pages.

CDM

Acte in the Rains

CDM Federal Programs Corp 60 Port Boulevard Suite 201 Name — Libby, MT 59923

Libby Asbestos Project CDM Contractor Logbook

Return To: Scott Supernaugh 318 Louisiana Ave Libby, MT 59923 406-293-8595

Every Page

► Initial and Date every page, Sign and Date last entry of the day, Line out once, initial and date all changes, NO blank lines

Daily Entries

Author, Date & Time, Weather, Activities, Persons on learn Level of PPE, Title of Governing Document

**CRRAP=Comprehensive Residential Removal Action Plan RAWP=Response Action Work Plan

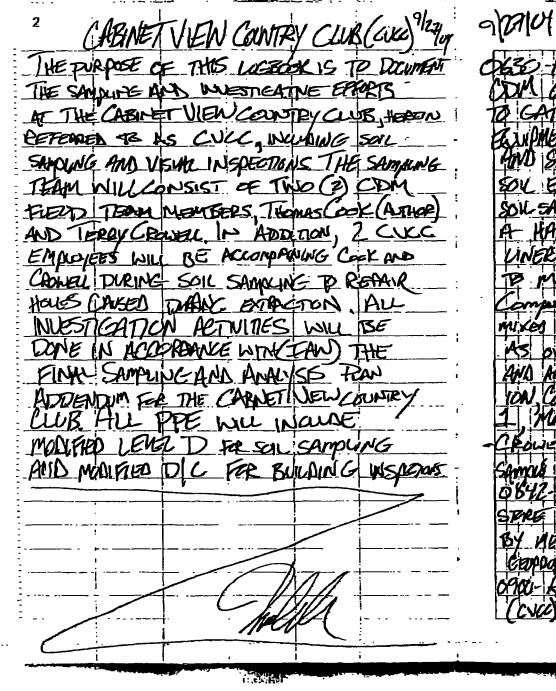
SS=Scott Supernaugh
TEC=Tommy Cook
SO=Shawn Oliveira
GP=Greg Parana
TC=Terry Crowell
DK=Dean Kozlowski
TV=Tom Vanderweel
KB=Køren Berry
OS=Dave Spielman

CONTENTS

PAGE REFERENCE

2-9 CVCC IL SAMPLING CSS (NVES). 927-344

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Sheet No.: S- 000578

Field Logbook No: 🔟	00386 Page 1	۷o:	OATA SHEET (FSDS) F Government: Cabinet	Date: 4/27/04	(cvcc
Land Use: Resident	tial School Com		ia) Mining Roadway Names: Tury (rown	, ,	
Data Item	Sample 1	1	Sample 2	Sample 3	
Index ID	CS- 18621	R	CS- 18622 alpho	CS- 18623	P 9/27/04
Location ID	5p- 125861	a prille	SP-125861	50-125862	
Sample Group	property	\	property	property	
Location Description (circle)	Back yard Front yard Side yard Driveway Other Hole #9 Gyce	<u>n</u>	Back yard Front yard Side yard Driveway Other Itole#9 green	Back yard Front yard Side yard Driveway Other Hole #9	
Category (circle)	FS . FD of Field Blank (lot or equipm	nent)	FD ofFlield Blank (lot or equipment)	FS FD of Field Blank (lot or equipme	ent)
Matrix Type (Surface soll unless other wise nated)	Surface Soll 0-1211 Other	-	Surface Sqi 12-14" Other Swosm frice stil	Surface Soil Other	
Type (circle)	Grab Comp.# subsamples	2	Grab Comp. # subsamples 5	Grab Comp. # subsamples _ S	
Sample Time	1124		1124	1340	
Top Depth (In.)	0		12	0	
Bottom Depth (in.)	12		24	8	
Field Comments Note if vermiculite is visible in sampled area	visible in upp+ 3" " * 1 * 2	· .	none visible in any subsamples	visible tailings makrial 4-8" depth - see map	מוופיים
Entered (LFO)	Volpe: * Entered Validated		Volpe: Entered Validated	Volpe: Entered Validated	
y = U	ble in subsample	on	map	1 •	

For Field Team Completion Completed by TC OC by VEC

Sheet No.: S- 000575

LIRRY	FIFLD	SAMPLE	DATA	SHEET	(ESDS)	FOR SOIL
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LIDDI	LIEFO SUMBLE ON LA	. 3HEE1 (F3D3) FC	NK 201F	
	6 Page No: 5			
Iddress: 378 Cabinet	1:ow caintry Club Rd 0	wner/Tenant: ('ab)net u	Gen Country	Cub CVCC
Business Name:CVCC_	l		J	
Land Use: Residential		Mining Roadway	Other ()
Sampling Team: MACTEC	CDM Other Na	mes: Tommy (sok)	Terry Crowel	

Data Item	Sample 1		Sample 2	1	Sample 3	
Index IQ	CS- 18624	T2.	CS- 18625	R	CS- 18626	È.
Location ID	SP-125863	727104	5P-125864	7 27/04	59-125865	7/27/4
Sample Group	property		property		property	
Location Description (circle)	Back yard Front yard Side yard Driveway Other Hole #9	nen's	Back yard Front yard Side yard Driveway Other Hole # Shoo	s Ltre	Back yard Front yard Side yard Ortveway Other Hole	ns Ffec
Category (circle)	FD of	ined)	FD of Fleid Blank (lot or equipm	ent)	FS FD of Field Blank (lot or equipm	ent)
Matrix Type (Surface soli unless other wise noted)	Surface Soil Other		Surface Soil Other		Surface Soil Other	-
Type (circle)	Grab Comp # subsamples	5	Grab Comp. # subsamples	· ·	Grab Comp. # subsamples _5	
Sample Time	1440		1520		1550 .	
Top Depth (in.)	0 872 9/27/04	I _	0		0	
Bottom Depth (in.)	8		9		8	
Field Comments Note if vermiculite is visible in sampled area	none visible in any subsample	 సి.	- SD		80	
	see map		see may		sce map	
Entered (LFO) : XO	Volpe: Entered Validated _		Volpe: Entered Validated		Volpe: Entered Validated	
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For Field Team Completion (Provide Initials)

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. *		•	Sheet No. S- 00552
LII	BBY FIELD SAMPLE	ATA SHEET (FSDS) F	OR SOIL
Field Logbook No;	100386 Page No: _	Sampling D	late: 9/27/04
	met view Country Ous !	M Owner/Tenant: CVCC	
Business Name: _C\		Adalas Baadway	0451
and Use: Resident		ia) Mining Roadway Names: <u>Terry Cron</u>	Other ()
aditibilitä ream lav.	OPIN OTHER	14dilles. 1011 971 9700	Control y Local
Data Iţem	Sample 1	Sample 2	Sample 3
Index ID	CS- 18627	CS- 18628 7	GS- 18629
Location ID	5p-125866	4 57 SP -125 BWb	
Sample Group	property	property	100 A A A A A A A A A A A A A A A A A A
Location Description (circle)	Back yard Front yard Side yard Driveway Other Hole # green	Back yard Front yard Side yard Driveway Other Tole # Green	Back yard Front yard Side yard Oriveway Other
Category (circle)	FD of Fleid Blank (lot or equipment)	FS of Field Blank (lot or equipment)	FS FD of Field Blank (lot or aquipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soll Other	Surface Soil Other Subswface soi	Surface Spil / R Other
Type (circle)	Grab Comp # subsamples 5	Grab Comp. # subsamples	Grab Comp. # supsamples
Sample Time	1650	1650	15
Top Depth (in.)	0	12	
Bottom Depth (in.)	12	24	
Fleid Comments Note if vermiculite is visible in sampled area	nore visible in any subsamples.	BD	BD
Entered (LFO)	Volpe: Entered Validated	Volpe: Entered Validated	Volpe: Entered Validated
Ups		·	

Sheet No.: S- CUCEDA LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Field Logbook No: 100386 Page No: 8 Sampling Date: 9/28/04 Address: 378 Cabinet View journing Club Rd Owner/Tenant: CVCC Business Name: CVCC Commercial Land Use: Residential School Mining Roadway Other (Sampling Team: MACTEC (CDM) Other_ Croncil Tommy Cook Names: Temy Data Item Sample 1 Sample 2 Sample 3 Index ID Έ. 7 CS- 18631 CS- 18632 CS- 18630 वादवाव्य a 08/04 912810H Location ID 5125867 5P-125868 GP-125868 Sample Group property property properti

Back yard Location Description Back yard Back yard Front yard Front yard Front yard (circle) Side yard Side yard Side yard Driveway Hole # 2 green Other Hole # 2 green Orlveway 13 Other) * FS) FO of Category (circle) FD of _ FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (lot or equipment) Surface Soi) Surface Soil Other Subsurface Surface Soil Matrix Type Other_ Other (Surface soil unless other wise nated) Grab Type (circle) Grab Comp # subsamples _ Comp # subsamples _ Comp # subsamples Sample Time: 0820 0849 0849 Top Depth (in.) 12 Bottom Depth (in.) 24 BD-00984 TO 004342 BD-Field Comments Note if vermiculite is visible in sampled ro visible vermiculate area in any substimples Valge: Voice: Volce: Vaijdated Entered Entered Entered (LFO) Entered_ Validated Validated

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Sheet No., S. DDOSS LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Field Logbook No: 100386 Page No: 8 Sampling Date: 9/2/104 ddress: 378 Cabinet Vira Lounty Clubrowner/Tenant: CVCL CVCC Business Name: ____ School Commercia Land Use: Residential Other (Mining Roadway Sampling Team: MACTEC CDM Other _____ Names: Temy Crowd! Tommy Cook Data Item Sample 1 Sample 2 Sample 3 Index ID 2 CS- 18634 rs- 18633 CS- 18635 7 absto 9/28/04 7 3804 Location ID CP-125870 92-125869 SP 115869 Sample Group property proper phypenty Location Description Back yard Back yard Back yard Front yard Front yard Front yard (circle) Side yard Side yard Side yard **Driveway** Driveway Driveway. HOLE #11 AMEN Other) Hole # Other) H/C # Other FD of FS) Category (circle) FD of FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (lot or equipment) Surface Soil) Surface Soil Other <u>Scubsirface</u> Soil Surface Soil) Matrix Type Other Offile _ (Surface sail unless other wise noted) Grab Grab Type (circle) Comp.# subsamples 5 Comp) # subsamples _____ Comp)# subsamples _______ 1035 Sample Time 0949 0949 0 Top Depth (in.) 0 12 Bottom Depth (in.) 12 BD-004342 Field Comments Note if vermiculite is visible in sampled no visible verniallite 4782 in any subsamples Volpe: Volce: Volge: Validated Entered (LFQ) Entered_ Entered Validated Entered Validated

For Field Team Completion
(Provide initials)

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Sheet No.: 8- 000020

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Field Logbook No: 100386 Page No: ___ Sampling Date: <u>4/23/04</u> Address: 378 Cabnet view (piùrh) Culb Rd Owner Tenant: CVCC Business Name: CVC' Land Use: Residential Commercial School Mining Roadway Other ((DM) Terry (novel) Sampling Team: MACTEC Tommy look Other Names: Data Item Sample 3 Sample 1 Sample 2 Index ID V CS- 18636 2 CS- 18637 CS- 18638 4 178 124 1128/01 1/2/14 Location ID SP-125872 SP-125870 SP-125871 Sample Group property property property Location Description Back yard Back yard Back yard Front yard Front yard Front yard (circle) Side yard Side yard Side yard Other Hole #3 aren Other Hile #4 + cebox Other Hole #4 green FS) FD of Category (circle) FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (lot or equipment) Matrix Type Surface Soil Other Subswface soil Surface Soil Surface Soil) (Surface soil unless other Other Other wise noted) Grab Type (circle) Grab Comp # subsamples 5 Comp. # subsamples Comp. # subsamples S Sample Time 1225 1258 1035 Top Depth (in.) 12 0 0 12 24 Bottom Depth (in.) 8 Pield Comments BD-Nate if vermiculite is visible in sampled no visible verniculate

For Field Team Completion (Provide juitals)	Completed by TC	OC by TEC	

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Sheet No : S- 00052 \$

Sheet No : S- OODS Z				
LIE	BBY FIELD SAMPLE I	DATA SHEET (FSDS) F	FOR SOIL	
Field Logbook No:		O Sampling D		
,		Owner/Tenant: C	<u>/CC</u>	
Business Name;				
Land Use: Resident				
Sampling leam: MAC	CTEC CDM Other	Names: Terry Crow	al may look	
Data Item	Sample 1	Sample 2	Sample 3	
Index ID	CS- 18639 2	CS- 18640 P	CS- 18641	
Location ID	Sp-125872	5P-125873	SP-125874 abolay	
Sample Group	broknyn	property	property	
Location Description (circle)	Back yard Front yard Side yard Davaway Other Hole #4 a reen	Back yard Front yard Side yard Oriveway Other) Hole #5 mens	Back yard Front yard Side yard Driveway Other Hole #5 short-tec	
Category (circle)	FS FD of Field Blank (lot or equipment)	FS PD of Field Blank (lot or equipment)	FS FD ofFI or equipment)	
Matrix Type (Surface soil unless other wise noted)	Sufface Soil Surface Soil	Surface Soll Other	Surface Soil Other	
Type (circle)	Grab Somo # subsamples 5	Grab Comp.# subsamples 5	Grap # subsamples 5	
Sample Time	1258	1353	1420	
Top Depth (in.)	12	0	0	
Bottom Depth (in.)	24	8.	8	
Fleid Comments Note if vermiculite is visible in sampled area	BD- (30434)	BD	BD	

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Sheet No.: S- - 000525

LIBBY FIELD SAMPLE DATA SHEET	(FSDS) FOR SOIL
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Field Lagback Na: _		Page No:	<u> </u>	Sampling Date	9/28	104
doress: 378 Cub	met view low	1thy Club Rd	Owner/Tena	int: CVCC		
Business Name:		1				
Land Use: Resider		Commercial			Other ()
Sampling Team: MA	CTEC (CDM)	Other	Names:	em Crowell,	Tomm	y COUK

Data Item	Sample 1		Sample 2		Sample 3
indax ID		12/09		20	CS- 18644
Location ID	50-125475		SP-125876		SP-125876
Sample Group	property		property		property
Location Description (circle)	Back yard Front yard Side yard Driveway Other Hole #5 long 4	HZ-	Back yard Front yard Side yard Driveway Other Itole #5 gree		Back yard Front yard Side yard Driveway Other) Hole#Squen
Category (circle)	FD ofField Blank (lot or equipme	ent)	FS FD of Field Blank (lot or equipment		FS) FD of Field Blank (lot or equipment)
Matrix Type (Surface sail unless other wise noted)	Surface Soil Other	-	Surface Soil	<	Surface Soil Other Subsurface soil
Type (circle)	Grab Comp. # subsamples 5	-	Grab Comp)# subsamples 5		Grab Comp # subsamples 5
Sample Time	1450		1545		1545
Top Depth (in.)	0		0		12
Bottom Depth (in.)	8		12		24.
Field Comments Note if vermiculite is visible in sampled area	no visible verm iculite in any subsamples	-	BD		₹
Entered (LFO)	Volpe: Entered Validated		Volpe: Entered Validated		/olpe: Intered Validated

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Sheet No.: S- 000523

LIE	BBY FIELD SAMPLE D	ATA SHEET (FSDS) F	OR SOIL	
Field Logbook No: 100386 Page No: 100386 Sampling Date: 9/29/04				
.ddress: 378 Ca	biret view country club		<u>C</u>	
Business Name:				
Land Use: Residential School Commercial Mining Roadway Other ()				
Sampling Team: MAC	CTEC CDM Other	Names:Tommy (COOK Terry (rowell	
Data Item	Sample 1	Sample 2	Sample 3	
Index ID	Z	L	12	
	CS- 18645	CS- 18646	CS- 18647 gloudet	
Location ID	SP-12=011	SP-125877	SP-125878	
Sarrie. Group	property	property	property	
Location Description (circle)	Back yard Front yard Side yard Driveway Other Hole + 6	Back yard Front yard Side yard Drivaway Other Hole 6 tel	Back yard Front yard Side yard Driveway Other Hole 15 5507 He	
Category (circle)	FD of Field Blank (lot or equipment)	Todinal W Fill of C5-18645 Field Blank (lot or equipment)	FD of Field Blank (lot or equipment)	
Matrix Type (Surface soil unless other wise noted)	Surface Soll Other	Surface Soil	Surface Soil	
Type (circle)	Grab Comp # subsamples5_	Grab Comp.)# subsamplesS	Comp.# subsamplesS_	
Sample Time	0832	9/29/04 -093 0846	0855	
Top Depth (in.)	0	. 0	0	
Bottom Depth (in.)	В	. В	8	
Field Comments Note if vermiculite is visible in sampled area	80-004342 No Sible Courte	BD	BD	
Entered (LFO)	Volps: Entered Validated	Volpe: Entered Validated	Volpe: Entered Validated	
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Sheet No.: S-	<u>000527</u>

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	LIBBY	FIELD SA	MPLE DA	TA SHEET	(FSDS) FC	OR SOIL	
Field Logbook I	No: 1003	86 F	Page No:		Sampling Da	te: 9/29/04	3
.ddress: <u>37</u> 2	3 cabinet	Country	Club Rd	Owner/Tena	ant:CVCC	,	
Business Name		ew /	cvcc		·		
Land Use: Re	sidential	School	Commercial	Mining	Roadway	Other ()
Sampling Team	: MACTEC	CDM) OII	ier	Names:	Terry Cron	ell Tommy	Cook
					•	,	

Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 18648	CS- 18649	CS- 18650
Location ID	51-125879	25880 أر	SP-125880
Sample Group	property	property	p roperty
Location Description (circle)	Back yard Front yard Side yard Driveway Other Holett womens	Back yard Front yard Side yard Driveway Other Hole#6 green	Back yard Front yard Side yard Driveway Other Hole #6 green
Category (circle)	FS FD ofField Blank (lot or equipment)	FD of Field Blank (lot or equipment)	F9 FD of Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil)	Surface Soil Other	Surface Soil Other Subsurface sol
Type (circle)	Grab Comp. # subsamples 5	Grab Comp. # subsamples 5	Grab Comp # subsamples 5
Sample Time	. 0918	1005	1005
Top Depth (In.)	0	0	12
Battom Depth (in.)	8	12	24
Field Comments Note if vermiculite is visible in sampled area	No USIBURIUM	BD	BD
Entered (LFO)	Volpe: Entered Validated	Volpe: Entered Validated	Volpe: Entered Validated

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	The same of the sa			Sheet No.: S- 000528	
	IBBY FIELD SAMPL	E D	ATA SHEET (FSDS) F	FOR SOIL	
Sheet No.: S- UUUS S LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Field Logbook No: 100386 Page No: Sampling Date: 929/04 .ddress: 378 Cabinet View Country Club Rd Owner/Tenant: CVCC					
.ddress: 378 Cab	met view Country Cli	ub R	d Owner/Tenant:	CC	
Business Name:	CVCC				
	ential School Comm	nerci	a) Mining Roadway		
Sampling Team: M	ACTEC COM Other		Names: Thomas (a	dc/ Terry Crowoil	
Data Item	Sample 1	 1	Sample 2	Sample 3	
Index ID		-			
	CS- 18651	الزياوم	CS- 18652	CS- 18653	
Location ID	SP-125881		SP-125882	SP-125883	
Sample Group	property		property	property	
Location Description (circle)	Front yard	long	Back yard Front yard Side yard Driveway Other Hack 7 Warras	Driveway	
Category (circle)	FD ofField Blank (lot or equipm	ent)	FS) FD of Fleid Blank (lot or equipment)	FD of	
Matrix Type (Surface soll unless other wise noted)	Surface Soil	-	Surface Soil Other	Surface Soil Other	
Type (circle)	Grab Comp. # subsamples		Grab 74/24/04// Comp.)# subsamples 4.	Grab Comp.# subsamples5	
Sample Time	1037		1117	1202	
Top Depth (in.)	0		0	0	
Battom Depth (in.)	8		8	12	
Field Comments	BD. 004342		80	BD	
Note if vermiculite is visible in sampled area			trace (few flakes) visible in 1 sub-	visible in 4-8" layer in 3	
			sample: estected	subsamples	
Entered (LFO)	Volpe: Entered Validated		Volpe: Entered Validated	Volpe: Entered Validated	
ps 30 per Ray Romp in are suspect of containing vernitable At					
	For Field Team Completion (Provide Initials)	Compl	eted by CC by TE	7	

P. 24/45

000529

Sheet	No ·	S-	 U	U.	U	•
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			Sheet No.: S-
LI	BBY FIELD SAMPLE D	ATA SHEET (FSDS) F	OR SOIL
	100386 Page No:		<i>1</i> 1
	et View Country Club Rd		
Business Name:			
and Use: Residen	tlal School Commerci	al Mining Roadway	Other (
Sampling Team: MA	CTEC CDM Other	Names: 10mmy Co	OK/Terry Crowell
Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 18654	CS- 18655	CS- 18656
Location ID	SP-125883	Sp.125884	6p-125885
Sample Group	propersy	ргорелу	property
Location Description (circle)	Rack yard Front yard Side yard Oriyeway Other) Hole #7 green	Back yard Front yard Side yard Drivaway Other Hole #8 teckox	Back yard Front yard Side yard Driveway Other Hole to tebox
Category (circle)	FS Field Blank (lot or equipment)	FD ofField Blank (lot or equipment)	FD of Field Blank (lot or equipment)
Mairix Type (Surface soil unless other wise noted)	Surface Soil Other Subsurface soil	Surface Soll Other	Surface Soll Other
Type (circle)	Grab Comp # subsamples 5	Grab Comp. # subsamples 5	Grab Comp. # subsamples5_
Sample Time	1202	1357	1425
Top Depth (in.)	12	0	0
Battom Depth (in.)	24	8	8
Field Comments Note if vermiculite is visible in sampled area	no visible vermantite no any subsamples	BD	BD
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Sheet No.: S- 000555

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Field Logbook No: 100386 Page No: 17 Sampling Date: 9/29/04					
Address: 378 Cabinet View Country Club Pd Owner/Tenant: CVCC					
Business Name: CVCC					
Land Use: Residential School Commercial Mining Roadway Other (
Sampling Team: MACTEC CDM Other Names: Tommy Cook/ Terry (rowell					
Data Item	Sample 1	Sample 2	Sample 3		
Index ID	CS- 18657	CS- 18658	2S- 18659		
Location ID	SP-125886	SP-125886	SP-125887		
Sample Group	property	property	property		
Location Description (circle)	Back yard Front yard Side yard Driveway Sthey Hole #8 green	Back yard Front yard Side yard Driveway Other Hole #8 Arcen	Back yard Front yard Side yard Driveway bunker Other) Sand pile		
Category (circle)	FS ofFloid Blank (lot or equipment)	FD of Field Blank (lot or equipment)	FD of Fleid Blank (lot or equipment)		
Matrix Type (Surface soil unless other wise noted)	Surface Soil	Surface Soll Other subsurface sal	Surface Soil stockpile		
Type (circle)	Grab Comp # subsamples 5	Grab Compl # subsamples 5	Grab Comp. # subsamples		
Sample Time	1516	1516	1530		
Top Depth (in.)	Ø	12	paterlay with		
Bottom Dapth (in.)	12	24	NA		
Field Comments	BD-004342	BP	BD-		
Note if vermiculite is visible in sampled area	no visible vermi culta		stodepile used for Alling all bunkers		
	no visible vermiculaci		Hilling his burkers		
12	Volpe:	Volps:	Valpe;		
Entered (LFO)	Entered Validated	Entered Validated	Entered Validated		

NO.976 P.26/49

- .		- -	Sheet No.: S- <u>00056</u> 8				
LI	BBY FIELD SAMPLE D	ATA SHEET (FSDS) F	OR SOIL				
Field Lagbook No; _	Field Logbook No: 100386 Page No: 13 Sampling Date: 9/29/04						
dress: 378 Cabinot Viow Country Clubrad Owner/Tenant: CVCL							
Business Name:			@				
Land Use: Residen							
Sampling Team: MA	CTEC CDM Other	Names: Tommy Cou	of Terry Crowll				
Data Item	Sample 1	Sample 2	Sample 3				
Index ID	CS-18660 V.	CS-18661	CS- 18663				
Location ID	SP-125887	SP-125888	59-125889				
Sample Group	property	property	property				
Location Description (pircle)	Back yard Front yard Side yard Oriveway	Back yard Front yard Side yard Orthoway Hole # techon #	Back yard Front yard Side yard Driveway Other Hole 43				
	Other bunker sand Ale	Other practice green					
`ategory (circle)	FS CS - 18659 Field Blank (lot or equipment)	FO of Fleid Blank (lot or equipment)	FS - FD of Field Blank (lot or equipment)				
Matrix Type (Surface spil unless other (wise noted)	Surface Soil Other Stockelle	Surface Soil	Surface Soil				
Type (circle)	Grab Comp. # subsamples	Grab Comp_# subsamples 5.	Grab Comp.)# subsamples				
Sample Time	1530	1542					
Top Depth (in.)	NA	0	0.				
Bottom Depth (in.)	NA	. 8	8:-				
Field Comments	BD	BD	B9				
Note if vermiculite is visible in sampled area	J. S. Blown of		* sample date on this sample is 9/30/04				
Entered (LFO)	Volpe: Entered Validated	Volpe: Entered Validated	Volpe: Entered Validated				
Entered (LFO)		•	•				

Sheet No.: 8- 000570

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL				
Field Logbook No: 100386 Page No: Sampling Date: 9/30/84				
diesa: INV		Owner/Tenant:N	A	
Business Name:				
Land Use: Residen	tial School Commerc	ial Mining Roadway	Other (NA)	
Sampling Team: MA	CTEC CDM Other	Names: <u>Jerry Cro</u>	NCH / Tommy Cook	
Data Item	Sample 1	Sample 2	Sample 3	
index ID				
Itiday ib	CS-18664		7	
	V			
Location ID	An- mami			
	AD-00001			
Sample Group	BLANK			
·	52			
Location Description	Back yard	Back yard	Back yard	
(circle) -	Front yard Side yard	Front yard Side yard	Prontyard . Side yard	
:	Other NA	Driveway (1)	Driveway	
		Other	9ther	
matagory (circle)	FS	FS FD of	FS FD of	
1.	Field Blank (lot of equipment)	Field Blank (lot or equipment)	Field Blank (lot or equipment)	
Matrix Type	Surface Soil	Surface Soil	Surface Soil	
(Surface soil unless other wise noted)	Surface Soil Other silica sard	Other	Other	
	Grab	Grab	Grab	
Type (circle)	Comp. # subsamples	Comp. # subsamples	Comp. # subsamples	
Sample Time	1615	/ =	•	
Top Depth (in.)	NA			
Bottom Depth (in.)	NA .			
Field Comments	BD- MK	BD-	BD	
Note if vermiculite is	DD		-	
visible in sampled		/		
4	. •	\cdot / .	~	
	,		!	
	Volpe:	Volpe:	Volpe:	
Entered (LFD)	Entered Validated	Entered Validated	Entered Validated	
(hs				

For Field Team Completion

	BY FIELD SAMPLE DA			
Field Logbook No:	100.386 Page No:	Sampling Da	te: <u>9 20 04</u>	
.ddress: 1260 cahin	et Hights Rd	Owner/Tenant: CVC	L (leases pumphage)	
Business Name:				
Land Use. Residentia	al School Commercial	Mining Roadway	Other ()	
Sampling Team: MAC	TEC ZDM Other	Names: 10mmy Cook	flany yowell	
Data Item	Cassette 1	Cassette 2	Cassette 3	
Index ID	CS- 18662 11914			
Location ID	BD-004343	·		
Sample Group (circle) (Subgroup of the property)	Garage, House, Shed, Pump House Other	Garage, House, Shed, Pump House Other	Garage, House, Shad, Pump House Other	
Location Description (circle) (Detailed gescription point within	Basement, Ground Floor Second Level Other	Basement, Ground Floor, Second Level Other	Basement Ground Floor, Second Level Other	
Matrix Type (circle)	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other	Horizontal Surfaces High Traffic Areas Other	
Category (circle)	FS FB-(field blank) LB-(lot blank)	F9 FB-(field-stack) LB-(of clark)	RS FB-(field blank) LB-(lot blank)	
Sample Area (cm²) (circle)	100 200 300 NA	100 200 300 WA	100 200 380 NA	
Filter Diameter (circle)	25mm 37mm.	25mm 37mm	25mm 37mm	
Pore Size (ĉircle)	(EM45) PCM-0,8	TEM- ,45 PCM- 0,8	TEM45 PCM- 0,8	
Flow Mater Type (circle)	Rotometer Ory-Cal NA	Rotometer Ory-Dai NA	Rotometer Dry-Cal NA	
Pump ID No.	691405	X		
Flow Meter ID No. 6242)-939p9/20/04-2380			
Start Time 1	0949 0952 0956			
Start Flow (L/min)	2.02			
Stop Time	0951 0954 0958	/		
Stop Flow (L/min)	2,02	/////	<u> </u>	
Pump Fault? (circle)	(No) Yes	No Yes	No Yes	
Field Comments	N ROOM 100 cm² Top of EUGOTRIC PANEL ON NEWALL	100 cm ²	100 cm²	
Cassatte Lot Number:	100 cm² N ROOM. FLOCK BY N W WALL	100 cm²	100 cm²	
23802	100 cm² S ROOM ON FLOOR BY NE WALL	100 cm ²	100 cm²	
· ·	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	Archive Blank (circle): Yes No	
Entered (LFO)	Volpe: Entered Validated	Entered Validated	Entered Validated	

Campining his TA

Sheet No.: D- 000297

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR DUST

Field Logbook No: ddress; Abril NA Business Name:	100386	_ Pag	e No:	17	`s	ilqmai	ng Da	te: <u>9/3</u>	104 104	
adress:	C1 CC	glatel		_ Owner	Tenant:		-126-6	- N/1 9/	126/04	
Business Name:		1201		N Adiad				ا ماده		
Land Use: Residentia Sampling Team: MAC	11 30 <u>110</u> 0		al III II Ci Ci a		ng r	ADDOM	/ay	Örilei () //
Data Item	Ca	ssetta	1		Cassett	e 2		C	Cassette 3	3
Index IO	CS-	1866	5							
Location ID	BD-005	1349 1349	10/1/04							
Sample Group (circle) (Subgroup of the property)	Garage, Ho Pump House Other	:		Pump Ha	House, St use			Garage, H Pump Hou Other		1
Location Description (dircle) (Detailed description point within the location)	Basement, Second Leve Other T. B		· ·	Second L	Ground			Second Le	Ground Fid vei	oor,
Matrix Type (circle)	Horizontal Surfaces High Traffic Areas Other NA		Horizontal Surfaces High Traffic Areas Other		Horizontal Surfaces High Traffic Areas Other					
Category (circle)	FS FB-()	blank) LB	-(iot blank)	FS FB-(field blank) LB-(lot blank)		FS FB-(field blank) LB-(lot blank)				
Sample Area (cm²) (circle)	100 200	300	NA	100	(00 3	90 ,	NA	100 20	0 300	NA
Filter Diameter (circle)	25mm	37mm		25mm	37m	m		25mm	37mm	
Pore Size (circle)	(EM45	PCM-	a,c	TEM45	PCM	8,0 -		TEM45	FCM- 0,	8
Flow Mater Type (circle)	Rotometer	Dry-Ca	i (NA)	Rotometer	בינום י	Cal	NA	Rotometer	Dry-Cal	NA
Pump ID No.		NA								
Flow Meter ID No.		1.								
Start Time		$T \perp$								
Start Flow (L/min)		77	,							
Stop Time										
Stop Flow (Limin)										
Pump Fault? (circle)	No	Yes	(NA)	No	Yes			No	Yes	
Field Comments	100 cm²		•	100 cm²				100 cm²		
Cassette Lot Number:	199 cm²		1	100 cm²				100 cm²		
23802	100 cm²			100 cm²			100 cm²			
Enterned (LFO)	Archive Blank (o Volpe: Enjere			Archive Blan			No	Archive Blank Entered		
46										

December 2004 Sampling Event

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Cabinet View Rd

FEB. 22. 2005

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Daily Entitles

 Author, date & time, weather, activities, persons on team, level of PPE, title of governing document.

CRRAP=Comprehensive Residential Removal Action Plan RAWP=Response Action Work Plan

Residential Removal Oversight Equipment
Small shovel, 4x6 and 9x12 poly sample bags, 5 gallon
buckets; radio, cell phone, camera, SKC low flow air
pumps, high flow air pumps, Rotometer, 20" box fan, 1
hp leaf blower, air pump stands, tygon tubing, 0.8um
PCM cassettes, GFIC splitters, soil probes.

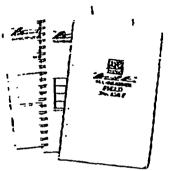
Air Clearance Procedures:

Prior to sampling a 1-hp leaf blower will be used to blow down the sample area. Air sampling pumps will be pre and post calibrated. During sampling a 20" box fan will be placed in the center of the sample area facing the ceiling-running on high.

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Daily Entitles

Author, date & lime, weather, activities, persons on learn, level of PPE, title of governing document.

CRRAP=Comprehensive Residential Removal Action Plan RAWP=Response Action Work Plan

Air Clearance Procedures:

Prior to sampling a 1-hp leaf blower will be used to blow down the sample area. Air sampling pumps will be pre and post calibrated. During sampling a 20" box fan will be placed in the center of the sample area facing the ceiling-running on high.

GIRA-General Information for Response Action

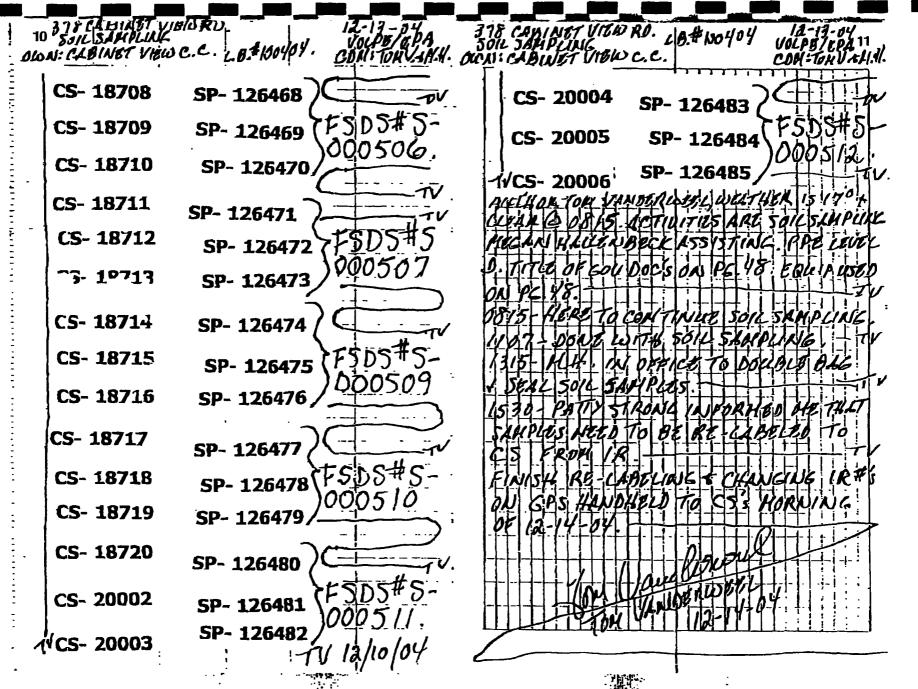
Residential Removal Oversight Equipment Small shovel, 4x6 and 9x12 poly sample bags, 5 gallon buckets; radio, cell phone, camera, SKC low flow air pumps, high flow air pumps, Rotometer, 20" box fan, 1 hp leaf blower, air pump stands, tygon tubing, 0.8um PCM cassettes, GFIC splitters, soil probes.

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CONTENTS	
PAGE REFERENCE	DATE
3 208 VANDERWOOD RD 12-2	11-29-01
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17. 1	12-2-04
	2-6-01
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	2-10-04
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	2-14-01
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P.48/49



NO.976 P.28/45 Shee; No : S- -

L. .[1	BBY FIELD SAMPLE D	ATA SHEET (FSDS) F	OR SOIL
Field Logbook No:	00474 Page No:	Sampling D	ate: 12/10/04
1dress: <u>378 (</u>	ABINET VIEW KI		ET VIEW COUNTRY CLU
Business Name: 🕰	BINET VIEW COUNT	RY CLUB	
Land Use: Residen	tial School Commerci	al Mining Roadway	Other (
Sampling Team: MA	CTEC CDM Other	Names: //ANDERW	FEL/HALLENBECK
Data Item	Sample 1	Sample 2	Sample 3
Index ID	CS- 18681	-CS- 18682	CS- 18683
Location (D	SP- 126441	SP- 126442	SP- 126443
Sample Group	PROPERTY	PROPERTY	PROPERTY
Location Description (circle)	Back yard Front yard Side yard Offveway Other	Back yard Front yard Side yard Other FAIRWAY	Back yard Front yard Side yard Driveway AIRWAY
Category (circle)	FD of	FD ofField Blank (lot or equipment)	FD of Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other	Other	Other
Type (circle) (Grab Comp. # subsamples	Grab Comp. # subsamples	Grab Comp. # subsamples
Sample Time	1330	1333	.1340
Top Depth (in.)	.0	0	0
Bottom Depth (in.)	7	/	1
Field Comments Note if vermiculite is visible in sampled	80-004342 No Ly seen	BD- <u>004342</u>	BD- <u>004342</u>
	NO LY seen	NO LY SCEN	NO LY SEN
(O) 10	Volpe: Entered Validated	Volpe: Entered Validated	Volpe: Entered Validated

For Field Team Completion	Completed by	OC BYAND
		J

FEB.22.2005 12:29PM NO.976 CDM Sheet No.: S- 000406 LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Field Logbook No: 100409 Page No: Sampling Date: Address: 378 CABINE Owner Tenant: CABINET VEW VEW COUNTRY CIUB Jusiness Name: (AB/NET School Commercial Mining Roadway Land Use: Residential Other (Names: VAUDERWEEL MALLENBEC Sampling Team: MACTEC (CDM) Other _ Data Item Sample 1 Sample 3 Sample 2 Index ID CS- 18686 CS- 18684 CS- 18685 Location ID SP- 126444 SP- 126445 SP- 126446 PROPERTY Sample Group PROPERTY Back yard Location Description Back yard Back yard Front yard Front yard Front yard (circle) · Side yard Side yard Side yard Driveway Driveway Driveway IR WAY Other Other Other ES) FSD Category (circle) FD of FD of FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (jot or equipment) SUNTACE SOIL Surface Soil Matrix Type Surface Squ Other_ Other Other Tertio seeinu lios easthur?) wise noted) Grab Grad Grab Type (circle) Comp. # subsamples Comp. # subsamples Comp. # subsamples Sample Time

<i>O</i>	0	
! ' /	1	1
BD-004342	BD-004342	BD-004342
NO LY Seen	No Ly seen	NO LY Seen
Volpe: Enterad Validated	Volpe; Entered Validated	Volpe: Entered Validated
	NO LY Seen	NO LY Seen NO LY Seen Volpe:

For Flaid Team Complation Completed by QC by (Provide Initials)

NO.976 P.30/49

Sheet No.: S- - 000407

	BBY FIELD SAMPLE D	IATA SHEET (FSDS) F	OR SOIL, , ,
Field Logbook No: _	100404 Page No: _	Sampling D	late: 12/10/0/
ddress: 378 CA	BINET VEW RD	Owner Tenant: CABINT	T VEW COUNTRY CH
dusiness Name: CA	BINET VIEW COUNT	RY CLUB	
Land Use: Residen	tial School Commerci	A Mining Roadway	Other ()
Sampling Team: MA	CTEC CDM Other	Names: VAUDER WES	EL HALLENBECK
			/
Data Item	Sample 1,	Sample 2	Sample 3
index ID	CS- 18687	C5- 18688	CS- 18689
Location ID	SP- 126447	SP- 126448	SP- 126449
Sample Group	PROPERTY	PROPERTY	PROPERTY
Location Description (circle)	Back yard Front yard Side yard Driveway Other FAIRLE	Back yard Front yard Side yard Driveway FAIRWAY	Back yard Front yard Side yard Driveway AIRWAY
Category (circle)	FD ofField Blank (lot or equipment)	FD ofField Blank (lot or equipment)	FD ofField Blank (lot or equipment)
Matrix Type (Surface spil unices ogner wise noted)	Surface Soit Other	Surface Sop Other	Surface Solo Other
Type (circle)	Grab Comp. # subsamples	Grab Comp. # subsamples	Grab Comp. # subsamples
Sample Time			
Top Depth (In.)	1355	1400	1404
Bottom Depth (in.)	: 7		
Field Comments Note if vermiculite is visible in sampled	вр. <u>004342</u>	BD-004342	BD-004342
area .	NO LY Seen	NO LV Seen	NO LV Seen
Entered (LFQ) XQ	Entered Validated	Entered Validated	Entered Validated
J			

For Field Team Completion	Completed by	ac by CO
(Provide Initials)	Completed by	

P.31/45

Sheet No.: S- 000455 LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Sampling Date, 12/10/09 Page No: Field Lagbook No: / ddress: 378 CHBINET VIEW RD Owner Tenant: CABINET VIEW COUNTRY PUBL VIEW COULDTRY CLUB Business Name: CARIN Land Use: Residential School Commercial Mining Roadway Other (Names: VANDERWEEL HAUENBEC Sampling Team: MACTEC CDM Other_ Data Item Sample 1 Sample 2 Sample 3 Index ID - CS- 18691 CS- 18690 CS- 18692 Location ID SP- 126450 SP- 126451 SP- 126452 PROPERTY PROPERT Sample Group PROPERI Location Description Back yard Back yard Back vard Front yard #3 Front yard #3 Mens Front yard pircle) Side yard Side yard Side yard Driveway FAIRLEY ASY **Priveway** Driveway Other Ona) FS FS F5) 'ary (circle) FD of FD of FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (lot or equipment) Surface Soil Surface Soil Surface 50ID Matrix Type Other _ Other Other _ (Surface spil unless other wise noted) Grap (Grab) Type (circle) Grab) Comp. # subsamples Comp. # subsamples Comp. # subsamples \AC7 Sample Time 141 Top Depth (In.) Bottom Depth (in.) Fleid Comments Note if vermiculity is visible in sampled area NO LV seen Volpe: Volpe: Volps: Entered Validated . Validated Entered_ Entered (LFO) Entered Validated

> For Field Team Completion QC by A Completed by (Provide Initials)

•		5	Sheet No., S- 00055
LI	BBY FIELD SAMPLE D	AJA SHEET (FSDs) Ed	OR SOIL
piela rogbodk No: 🔨	70 70 7 Page No	Owner Tenant: CABINE	12/10/04
•	BINET VIEW RD.		1 VIEW NEWTRY CLIEB
Business Name: 📣	BINET VIEW COUNTR		
Land Use: Resident			Other ()
Sampling Team: MAC	CTEC CDM Other	_ Names: VFLAVER WE	EL/HORDEN DECK
Data Item	Sample 1	Sample 2	Sample 3
Index ID	1		
linet in	C5 18693	C5- 18694	CS- 18695
Location ID	SP- 126453	SP- 126454	SP- 126455
Sample Group	PROPERTY	PROPERTY	PROPERTY
Location Description (circle)	Back yard Front yard Side yard Driveway Other	Back yard Front yard Side yard Driveway Other FAIRLUAY	Back yard Front yard Side yard Driveway Other FAIR(JA)
Category (circle)	FD of Field Blank (lot or aquipment)	FD of	FS FD of Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soll Other	Surface Soll Other	Surface Soil Other
Type (circle)	Grab Comp. # subsamples	Grab Comp. # subsamples	Grab Comp. # subsamples
Sample Time	一年かめ	1431	1434
Top Depth (in.)	0	0	. 0
Bottom Depth (in.)		1	1, .
Field Comments Note if vermiculite is visible in sampled area	80-004342 NG LY seen	100 LV seen	NO LY Seen
		Valence	
Entered (LFO) XO_	Volpe: Entered Validated	Volpe: Entered Validated	Volpe; Entered Validated
0			,

For Field Team Completion (Provide Initials)	Completed by	OC BY	,.
		9.	

NO.576 P.33/49

Sheet No.: S- 000502

LIBBY FIELD SAMPLE DATA SHEET	(FSDS) FOR SOIL
-------------------------------	-----------------

CIDO!	LIEFO AWINI FF DV	(IV SHEET (I	2007101	1 4011	
Field Logbook No: 1004	A Page No:	9 sa	ampling Date	12/10	104
.ddress: 378 Cabi	net view Rd	Owner/Tenant:	<u>Cabine</u>	+ View	Country Club
Business Name: Cabine					•
Land Use: Residential	School Commercial		·	Other ()
Sampling Team: MACTEC	CDM) Other	Names: Vende	erweel	Hallen	beck

Data Item	Sample 1	Sample 2	Sample 3
Ol xebn	CS- 18696	CS- 18697	CS- 13698
Location ID	SP- 126456	SP- 126457	SP- 126458
Sample Group	Property	Property	Property
Location Description (circle)	Back yard #4 Feirvey Front yard Side yard Driveway Other	Back yard Front yard Side yard Driveway Other	Back yard 45 Tee Front yard Side yard Oriveway Other
Category (circle)	FD ofField Blank (lot or equipment)	FS FD ofField Blank (lot or equipment)	FD of Field Blank (lot or equipment)
Matrix Type (Sufface soil unless ather wise noted)	Surface Soil Other	Surface Spir Other	Surface Soil Other
Type (circle)	Grab Comp. # subsamples	Grab Comp. # subsamples	Grab Comp. # subsamples
Sample Time	439	1443	1448
Tap Depth (in.)	, , 0	. 0	0
Bottom Depth (in.)			1
Field Comments Note if vermiculite is visible in sampled area	80.004342 No LY Seen	NO LV Seen	NO LV Seen
,			
Entered (LFO)	Volpe: . Validated	Volpe: Entered Validated	Volpe: Entered Validated

For Field Team Completion	Completed by	ochu O
(Provide Initials)	Completed by	ac by

FEB.22.2005 12:32PM H.34/45 CDi¹ NO.976 Sheet No.: S- 000503LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL MOH Sampling Date: 12/10/04 11/15/01 Field Logbook No: -10040A Page No: _ ddress: 378 Cobinet View Rd Owner Tenant: Cobinet View Country Club Business Name: Cobinet View Country Cl Ub Commercial Land Use: Residential School Mining Roadway Other (Sampling Team; MACTEC CDM Other Hellenbec Names: Vanderweel Sample 3 Data Item Sample 2 Sample 1 Index ID 1CS-18699 CS- 18700 CS- 1870: Location ID 5P- 126459 SP- 126460 SP- 126461 Sample Group Propert Proper Propert Back yard Location Description Back yard Back yard Front yard \$5 Fairway Front yard Front yard (circle) Side yard Side yard Side yard NOW Other Tee Driveway Driveway Other Fairwe Other FS) Category (circle) FD of FD of FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (lot or equipment) Surface Soil Surface Soil Surface Soil Matrix Type Other Other (Surface soil unless other Other wise noted) Grab (Grab) Grab) Type (circle) Comp. # subsamples Comp. # subsamples Comp. # subsamples Sample Time Top Depth (in.) Bottom Depth (in.) BD- 004342 Field Comments Note if vermiculite is belgmas ni sidjeiv NO LY SEEM NO LY seen No LY Secon prea

For Field Team Completion	Completed by	OC by
(Provide initials)	Optioplated by	OC by

Valpe:

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Validated

Volpe;

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Validated

Volpe:

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Entered (LFO) AD

- 404E00

FEB.22.2005 12:32PM P.35/45 NO.976 0<u>0050</u>4 Sheet No.: S-LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL Field Logbook No: 100404. Page No: Sampling Date: 12/10/04 ddress: 378 Cabinet OwnerTenant: Cobinet View Business Name: Cobinet View Country Clul Commercia Other (Land Use: Residential Roadway School Mining Hallenbec Sampling Team: MACTEC (CDM) Other_ Names: Vanderweel Sample 3 Sample 2 Sample 1 Data Item Index ID CS- 18704 CS- 18702 CS- 18703 Location ID

racation in	SP- 126462	SP- 126463	SP- 126464
Sample Group	Property	Property	Property
Location Description (circle)	Back yard Front yard #5 Feirwey Side yard Driveway Other	Back yard Front yard Side yard Driveway Other	Back yard Front yard & G Tee Side yard Driveway Other France
Catagory (circle)	FD of Fleid Blank (lot or equipment)	FS FD of Field Blank (lot or equipment)	FD of Field Blank (lot or equipment)
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other	Surface Soil Other	Surface Sol Other
Type (circle)	Grab Comp. # subsamples	Grab Comp. # subsamples	Grab Comp. # subsamples
Sample Time	0857	0903	CTC3
Top Depth (in.)	, . 0	0	0
Bottom Depth (in.)	\	1	
Field Comments Note if vermiculite is visible in sampled area	80-004342 No LV seen	80-004342 No LY sich	BD-004342 NO LV-RUM
Entered (LFO)	Voipe: Entered Validated	Volpe: Entered Validated	Volpe: Entered Validated

For Field Team Completion	•	i i
Lat usid regin centibishen	Completed by	DC 42
/Bro. 2do Joikoles	aduiblesed ny	1 T (V)
(Provide Initials)		

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL MOH Field Logbook No: 100404 Sampling Date: +2/10/04 15/19/19 Page No: ddress: 378 Cabinet View Rd Owner Tenant: Cobinet View Country Club try Club Business Name: Cobinet View Coun Land Use: Residential School Commercia Mining Roadway Other (Sampling Team: MACTEC COM Other_ Names: Vander wee Sample 3 Data Item Sample 1 Sample 2 Index ID CS- 18705 CS- 18707 CS- 18706 Location ID SP- 126467 SP- 126465 SP- 126466 Sample Group Proper Proper Location Description Back yard Back yard Back yard Front yard Front yard Front yard (circle) Side yard Side yard Side vard Driveway Oriveway **Driveway** Tee Other Other -Other FS) Category (circle) FO of FD of FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (lot or equipment) Syrtace Soil Surface Sol Surface Soil Matrix Type Other_ Other_ Other_ (Surface soil unless other wise noted) Grab) Grab) Grab) Type (circle) Comp. # subsamples Comp. # subsamples Comp. # subsamples 0924 Sample Time 13434 Top Depth (in.) 0 Bottom Depth (in.) Field Comments Note if vermiculite is NO LV seen visible in sampled 1/3 - 1/ 500/ NO LY SUR! area Voige: Volpe: Volpe: Validated Entered_ Entered . Entered (LFO) Entered_ Validated. Validated

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Sheet No.: S-000503

LII	BBY FIELD SAMPLE D	ATA SHEET (FSDS) F	OR SOIL MOST		
Field Logbook No: 100404 Page No: 10 Sampling Date: 12/10/04/13/13/					
\ddress: 37% (Address: 378 Cabinet View Rd Owner Tenant: Cabinet View Country				
	binet View Coun				
Land Use: Resident		Mining Roadway	Oţher ()		
Sampling Team: MA	CTEC CDM Other	Names: Knderwe	el/Hallenbeck		
		\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	·		
Pata Item	الرب Sample 1	Sample 2	Sample 3		
index ID	CS- 18708	CS- 18709)	CS- 1871010 30		
Location ID	20,	100	7.7		
	SP- 126468	SP- 126469	SP- 126470		
Sample Group					
	Property	Property	Property		
Location Description	Back yard & G Friendly	Back yard the Feirmey	Back yard #7 Tee		
(circle)	Side yard	Side yard Side yard	Front yard Side yard		
	Side yard Driveway Other	Side yard Driveway Other	Other Tee Termey		
Category (circle)	FS	(3)	FS		
carefold (clicia)	FD of	FD af	FD of		
	Field Blank (lot or equipment)	Field Blank (lot or equipment)	Field Blank (lot or equipment)		
Matrix Type	Surface Soil	Surface Son	Surface Soil Other		
(Sulface soil unless other wise noted)	Other	Other	Stilei		
Type (circle)	(Grab)	Grab	Grab		
	Comp. # subsamples	Comp. # subsamples	Comp. # subsamples		
Sample Time	17933	0944	0744		
Top Depth (in.)	. 0	G	0		
Bottom Depth (in.)	1				
Field Comments	BD-004342	BD-004342	BD-004342		
Note if vermiculite is visible in sampled					
area	No IN ocen	No LV SCEN	المام سلات دلاا		
. 8	Vojpe:	Vqlpe:	Volpe:		
Entered (LFO) 10	Entered Validated	Entered Validated	Entered Validated		
7					

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(Provide Initials)	Completed by	ac pX/O

Sheet No : S-	000565

LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL MOH Sampling Date: 19/10/04 13/13/15/ Field Logbook No: 100404 Page No: ddress: 378 Cabinet View Rd Owned Tenant: Cebinet View Business Name: Cabinet View Country Club Land Use: Residential School Commercia Other (Minina Roadway Sampling Team: MACTEC COM Other _ Names: Vander week Hallenbes Data Item Sample 1 Sample 2 Sample 3 Index ID CS- 18711 CS- 18712 CS- 18713 Location ID SP- 1264 SP- 126472 SP- 126471 Sample Group Prone Proper Back yard # 85 Location Description Back yard Front yard Front yard Front yard (circle) Side yard Feirwit Side yard Side yard Driveway Driveway Driveway Other) Other Other FS FS Category (circle) FD of FD of FD of Field Blank (lot or equipment) Field Blank (lot or equipment) Field Blank (lot or equipment) Surface Soil Surface Soil Matrix Type Surface Soil Other (Surface soil unless other Other_ Other Grab Grab) Grab_ Type (circle) Comp. # subsamples Comp. # subsamples Comp. # subsamples 1037 Sample Time Top Depth (in.) Bottom Depth (in.) BD-M4342 BD. 004342 BD-004342 Field Comments Note if vermiculite is No LY scien visible in sampled No LV scan NO LY SOEN area Volpa: Valpe: Voloe: Validated Entered Entered (LFO) Entered_ Validated Entered Validated

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For Field Team Completion	l <u> </u>	0	•
1	Completed by	ac 🔊	
(Provide Initials)			

NO.976 P.39/45

			Sheet No.: S- 01050;
. LI	BBY FIELD SAMPLE C	ATA SHEET (FSDS) F	OR SOIL NADLE
Field Logbook No: 🚺	00404 Page No: _	10 Sampling C	Date: 12/10/04 13/17
\ddress: 3-18 C	zbinet View Rd	Owner Tenant: Cebin	et View Country C
	binet View Cour		- <i>t</i>
Land Use: Resident Sampling Team; MA(•	Other (
adithinia Lodili' MV		Names: Vanderwe	EN Hallerbeck
Data Item	Sample 1 Julia	Sample 2	Sample 3
index ID	CS- 18714 X	CS- 18715	CS- 18716
Location ID	77	2/01	77
Hackidi ib	SP- 126474	SP- 126475	SP- 126476
Sample Group		D 1.	
Lacation Basedolles	Property	Property	Property
Location Description (circle)	Back yard Front yard	Back yard #8 Feirwey	Back yard Front yard
• • •	Side yard Driveway	Side yard Oriveway	Side yard Oriveway
	Tee WY	Other Tee Pilo	Other Feirway 8
Category (circle)	FS I PD of	FS of	FD of
	Field Blank (lot or equipment)	Field Blank (lot or equipment)	Field Blank (lot or equipment)
Matrix Type	Surface Soil	Surface Soil	Surface Soil
April (antiaca soll finises other	Other	Other	Other
Type (circle)	Grab	Grab	Grab
	Comp. # subsamples	Comp. # subsamples	Comp. # subsamples
Sample Time	1036	1030	10:34
Top Depth (in.)	. 0	0	0
Bottom Depth (in.)	1		, ,
Field Comments Note if vermiculite is	BD-004342	BD-004342	BD-004342
visible in sampled	No 116445	Nanden	NO LY SEEN
area	NO LY SERIT	NO LY SEEN	וושינע אינן טען
	Volpe;	Volpa:	Volpe:
Entered (LFO)	Entered Validated	Entered Validated	Entered Validated

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(Provide Initials)	Completed by	ac by WO

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P.40/49

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LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL NOT Field Logbook No: 100404 Sampling Date: 12/10/04 Page No: ___ iew Rd Iddress: 378 Cabinet Owner enant: Cabin et View Country Business Name: Cabinet View Cruntry Club Land Use: Residential School Commercial Other (Roadway Mining Hellinbeck Sampling Team: MACTEC CON Other Names: Venderweel Sample 3 Data Item Sample 2 Sample 1 Index ID CS- 18719 CS- 18717 CS- 18718 Location ID SP- 126479 SP- 126477 SP- 126478 Sample Group Back yard Location Description Back yard Back yard Front yard Front yard Front yard (circle) Side yard Side yard Side yard Driveway Other Te Oriveway
Other Tee Driveway OHER F FS FS) Category (circle) FD of FU of FD of Field Blank (lot or equipment) Field Blank (lot or aquipment) Field Blank (lot or equipment) Surface Soil Surface Soil Surface Soil Matrix Type Other Other Other_ (Surface soil unless other (belon sew Grab Grab Grab Type (circle) Comp. # subsamples Comp. # subsamples Comp. # subsamples 1C47 10:39 1053 Sample Time Top Depth (in.) Bottom Depth (in.) BD-004342 Field Comments Note if vermiculite is MOHIZAZION visible in sampled v 5een いいとう ない 下へ MC LY SCEN area VCS Volpe: Volce: Volpe: Validated Entered Entered Validated Entered Validated Entered (LFO)

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Sheet No.: 5- 0105:1

LIE	BBY FIELD SAMPLE D	ATA SHEET (FSDS) F	OR SOIL		
Field Logbook No: 100404 Page No: 10 Sampling Date: 12/10/04/13/13					
ddress: 278 C	whinet View Rd	_ Owner Tenant: Cebin	et View Country Cl		
	binet View Count		4		
Land Use: Resident			Other (Cl/Hallenbeck		
sampiling realti: MAC	OTEC COM Other	_ Names: \croerwe	L L		
Data Item	Sample 1	· Sample 2	Sample 3		
index ID	CS- 18720	CS- 20002	CS- 20003		
Location ID	SP- 126480	SP- 126481	SP- 126482		
Sample Group	Property	Property	Property		
Location Description (circle)	Back yard the drop Front yard Crea Side yard Driveway Other	Back yard the Front yard Side yard Oriveway Other	Back yard Front yard Side yard Driveway Other		
Category (circle)	FD of	FID ofFleid Blank (lot or equipment)	FD ofField Blank (lot or equipment)		
Matrix Type (Surface soil unless other wise noted)	Surface Soil Other	Surface Soil Other	Surface Soll Other		
Type (circle)	Grab Comp. # subsamples	Grab Comp. # subsamples	Grab Comp. # subsamples		
Sample Time	1059	<u> د</u> ۱۱۵	1103		
Top Depth (in.)	0	0	3		
Battom Depth (in.)	1	\			
Field Comments Note if vermiculite is visible in sampled area	80-004342 No W seen	80-004342 NO LY SCEA	80- <u>00434</u> 2 No Ly scen		
Entered (LFO)	Voipe: Entered Validated	Volps: Entered Validated	Volpe: Entered Validated		

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P.42/49 NO.976

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LIBBY FIELD SAMPLE DATA SHEET (FSDS) FOR SOIL MORE						
Field Logbook No: No. Page No: 1) Sampling Date: +2/10/04						
'iddress: 378 Cabinet View Rd Owner/Tenant: Cabinet View Country Club						
Business Name: Cabinet View Country Club						
Land Use: Resider		- AA A	9ther()			
Sampling Team: MACTEC COM Other Names: Hellenbeck / Venderwee						
Data Item	Sample 1	Sample 2	Sample 3			
Index ID		4				
, III440 IP	C5- 20004	US- 20005	CS- 20006			
Location ID	73/	2	2/2			
•	SP- 126483	SP- 126484	SP-'126485			
Sample Group						
	Property	Property	Property			
Location Description	Back yard the Feimer	Back yard HOL Feirwey	Backyard #1 Icdies			
(circie)	Front yard Side yard	Front yard Side yard	Front yard tee			
	Other Lee	Other Technology	Front yard tee Side yard Driveway Other Frickey			
Category (circle)	FS	FS	F5			
category (cures)	FD of	FD of	FD of			
	Field Blank (lot or equipment)	Field Blank (lot or equipment)	Field Blank (lot or equipment)			
Matrix Type	Surface Soil Other	Surface Soil Other	Surface Soil Other			
(Surface soil unless other	Outet	Outer				
Type (circle)	Grab	Grab	Grab			
	Comp. # subsamples	Comp. # subsamples	Comp. # subsamples			
Sample Time	1113	ilad	1335			
Top Depth (in.)	. 0	O	٥			
Bottom Depth (in.)			1			
Field Comments Note if vermiculity is	80-004342	BD-004342	BD-004342			
visible in sampled area	No iv seen	No LY SCEN	NO LY Seen			
			·			
1h	Volpe:	Volpe;	Valpe:			
Entered (LFO) (LFO)	Entered Validated	Entered Validated	Entered Validated			
, 0						